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LAMBERT-ST. LOUIS INTERNATIONAL AIRPORT DATA PACKAGE NUMBER 3. --ETC(U)

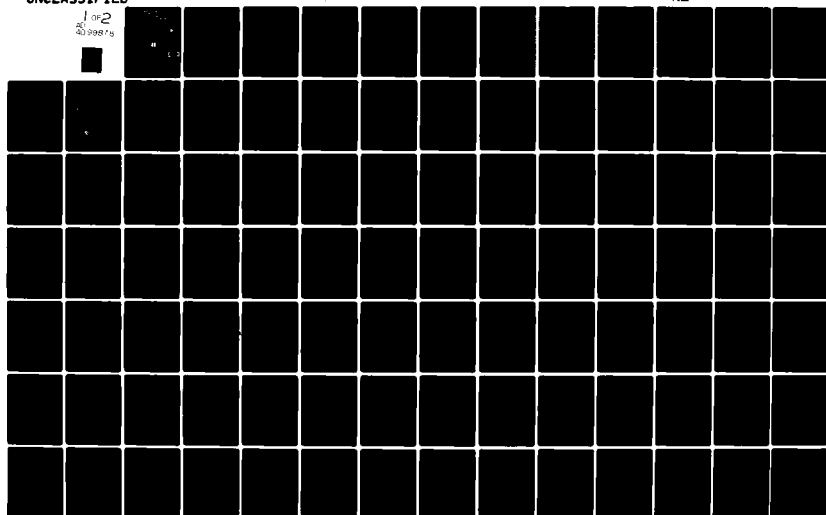
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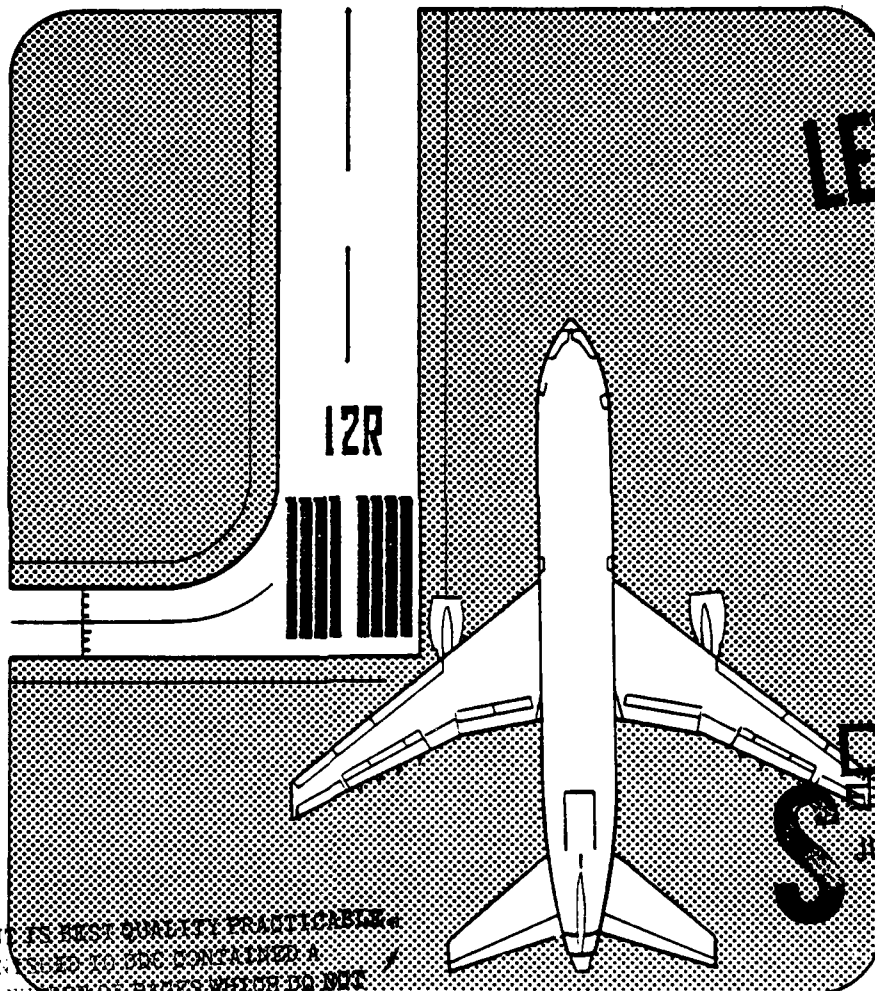
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LAMBERT-ST. LOUIS INTERNATIONAL AIRPORT DATA PACKAGE NO. 3.

AIRPORT IMPROVEMENT
TASK FORCE DELAY STUDIES.

AD A099878



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Peat, Marwick, Mitchell & Co.

MARCH 1980

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Attachment A

EXPERIMENTAL DESIGN AND
TABLE OF EXPERIMENTS

Lambert-St. Louis International Airport

St. Louis
Airport Improvement Task Force Delay Studies

Prepared by
Peat, Marwick, Mitchell & Co.
San Francisco, California

March 1980

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
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DESCRIPTION OF EXPERIMENTS
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

A-1

Experiment number	Model	Arrival runways	Departure runways	Weather	Demand	ATC	Improvements
1	ASM ^a	12R,12L	12R,12L	VFR	1979 Demand and Mix	Present ^b	Baseline
2	ASM	12R,12L	12R,12L	IFR1	1979 Demand and Mix	Present	Baseline
3	ASM	12R,12L	12R,12L	IFR2	1979 Demand and Mix	Present	Baseline
4	ASM	30R,30L	30R,30L	VFR	1979 Demand and Mix	Present	Baseline
5	ASM	30R,30L	30R,30L	IFR1	1979 Demand and Mix	Present	Baseline
6	ASM	30R,30L	30R,30L	IFR2	1979 Demand and Mix	Present	Baseline
7	ASM	30R,30L,24	30R,30L	IFR1	1979 Demand and Mix	Present	Baseline
7a	ASM	30R,30L,24	30R,30L	VFR	1979 Demand and Mix	Present	Baseline
8	ASM	12R,12L	6,12R,12L	VFR	1979 Demand and Mix	Present	Baseline
9	ASM	12R,12L	6,12R,12L	IFR1	1979 Demand and Mix	Present	Baseline
10	ASM	12R,12L	6,12R,12L	IFR2	1979 Demand and Mix	Present	Baseline
11	ASM	24	24	IFR2	1979 Demand and Mix	Present	Baseline
12	ASM	12R,12L,17	12R,12L	VFR	1979 Demand and Mix	Present	Baseline
13	ASM	12R,12L,17	12R,12L	IFR1	1979 Demand and Mix	Present	Baseline
14	ASM	12R,12L	12R,12L	VFR	1979 Demand and Mix	Present	A/F Development
15	ASM	12R,12L	12R,12L	IFR1	1979 Demand and Mix	Present	A/F Development
16	ASM	30R,30L	30R,30L	VFR	1979 Demand and Mix	Present	A/F Development
17	ASM	30R,30L	30R,30L	IFR1	1979 Demand and Mix	Present	A/F Development
18	ASM	30R,30L,24	30R,30L	IFR1	1979 Demand and Mix	Present	A/F Development
18a	ASM	30R,30L,24	30R,30L	VFR	1979 Demand and Mix	Present	A/F Development
19	ASM	12R,12L	6,12R,12L	VFR	1979 Demand and Mix	Present	A/F Development
20	ASM	12R,12L	6,12R,12L	IFR1	1979 Demand and Mix	Present	A/F Development
21	ASM	12R,12L,17	12R,12L	VFR	1979 Demand and Mix	Present	A/F Development
22	ASM	12R,12L,17	12R,12L	IFR1	1979 Demand and Mix	Present	A/F Development
23	ASM	30R,30L	30R,30L	IFR1	1979 Demand and Mix	Present	LDA Approach
24	ASM	30R,30L,24	30R,30L	IFR1	1979 Demand and Mix	Present	LDA Approach
24a	ASM	30R,30L,24	30R,30L	VFR	1979 Demand and Mix	Present	LDA Approach
25	ASM	12R,12L	6,12R,12L	IFR1	1979 Demand and Mix	Present	LDA Approach
26	ASM	12R,12L	12R,12L	VFR	1985 Demand and Mix	Present	Baseline
27	ASM	12R,12L	12R,12L	IFR1	1985 Demand and Mix	Present	Baseline
28	ASM	12R,12L	12R,12L	IFR2	1985 Demand and Mix	Present	Baseline
29	ASM	30R,30L	30R,30L	VFR	1985 Demand and Mix	Present	Baseline
30	ASM	30R,30L	30R,30L	IFR1	1985 Demand and Mix	Present	Baseline
31	ASM	30R,30L	30R,30L	IFR2	1985 Demand and Mix	Present	Baseline
32	ASM	30R,30L,24	30R,30L	IFR1	1985 Demand and Mix	Present	Baseline
33	ASM	12R,12L	6,12R,12L	IFR1	1985 Demand and Mix	Present	Baseline
34	ASM	12R,12L,17	12R,12L	IFR1	1985 Demand and Mix	Present	Baseline
35	ASM	12R,12L	12R,12L	VFR	1985 Demand and Mix	Present	A/F Development
36	ASM	12R,12L	12R,12L	IFR1	1985 Demand and Mix	Present	A/F Development
37	ASM	30R,30L	30R,30L	VFR	1985 Demand and Mix	Present	A/F Development
38	ASM	30R,30L	30R,30L	IFR1	1985 Demand and Mix	Present	A/F Development
39	ASM	30R,30L,24	30R,30L	IFR1	1985 Demand and Mix	Present	A/F Development
40	ASM	12R,12L	12R,12L,6	IFR1	1985 Demand and Mix	Present	A/F Development
41	ASM	30R,30L	30R,30L	IFR1	1985 Demand and Mix	Present	LDA Approach
42	ASM	30R,30L,24	30R,30L	IFR1	1985 Demand and Mix	Present	LDA Approach
43	ASM	12R,12L	12R,12L,6	IFR1	1985 Demand and Mix	Present	LDA Approach
44	ASM	12R,12L	12R,12L	VFR	1985 Demand and Mix	Present	Terminal Expansion
45	ASM	30R,30L	30R,30L	IFR1	1985 Increase Heavy Mix	Present	A/F Development
46	ASM	30R,30L,24	30R,30L	IFR1	1985 Increase Heavy Mix	Present	A/F Development
47	ASM	30R,30L	30R,30L	IFR1	1985 Increase Heavy Mix	Present	LDA Approach
48	ASM	30R,30L	30R,30L	IFR1	1985 Decrease GA Mix	Present	A/F Development
49	ASM	30R,30L,24	30R,30L	IFR1	1985 Decrease GA Mix	Present	A/F Development
50	ASM	30R,30L	30R,30L	IFR1	1985 Decrease GA Mix	Present	LDA Approach
51	ASM	12R,12L	12R,12L	VFR	1990 Demand and Mix	Present	A/F Development
52	ASM	12R,12L	12R,12L	IFR1	1990 Demand and Mix	Present	A/F Development
53	ASM	12R,12L	12R,12L	IFR2	1990 Demand and Mix	Present	A/F Development
54	ASM	30R,30L	30R,30L	VFR	1990 Demand and Mix	Present	A/F Development
55	ASM	30R,30L	30R,30L	IFR1	1990 Demand and Mix	Present	A/F Development
56	ASM	30R,30L	30R,30L	IFR2	1990 Demand and Mix	Present	A/F Development
57	ASM	24,30R,30L	30R,30L	IFR1	1990 Demand and Mix	Present	A/F Development
58	ASM	12R,12L	12R,12L,6	IFR1	1990 Demand and Mix	Present	A/F Development
59	ASM	12R,12L,17	12R,12L	IFR1	1990 Demand and Mix	Present	A/F Development
60	ASM	30R,30L	30R,30L	IFR1	1990 Demand and Mix	Present	LDA Approach
61	ASM	24,30R,30L	30R,30L	IFR1	1990 Demand and Mix	Present	LDA Approach
62	ASM	12R,12L	12R,12L,6	IFR1	1990 Demand and Mix	Present	LDA Approach

Table 1 (continued)

DESCRIPTION OF EXPERIMENTS

Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

Experiment number	Model	Arrival runways	Departure runways	Weather	Demand	ATC	Improvements
63	ASM	12R,12L	12R,12L	VFR	1990 Demand and Mix	Present	Terminal Expansion
64	ASM	12R,12L	12R,12L	VFR	1990 Demand and Mix	Present	Relocate Midcoast Aviation
64a	ASM	12R,12L,17	12R,12L	VFR	1990 Demand and Mix	Present	Relocate Midcoast Aviation
65	ASM	30R,30L	30R,30L	IFR1	1990 Increase Heavy Mix	Present	A/F Development
66	ASM	24,20R,30L	30R,30L	IFR1	1990 Increase Heavy Mix	Present	A/F Development
67	ASM	30R,30L	30R,30L	IFR1	1990 Increase Heavy Mix	Present	LDA Approach
68	ASM	30R,30L	30R,30L	IFR1	1990 Decrease GA Mix	Present	A/F Development
69	ASM	24,30R,30L	30R,30L	IFR1	1990 Decrease GA Mix	Present	A/F Development
69a	ASM	24	24	IFR2	1990 Decrease GA Mix	Present	Baseline
70	ASM	30R,30L	30R,30L	IFR1	1990 Decrease GA Mix	Present	LDA Approach
71	ASM	12R,12L	12R,12L	VFR	1990 Demand and Mix	Future ^c	A/F Development
72	ASM	12R,12L	12R,12L	IFR1	1990 Demand and Mix	Future	A/F Development
73	ASM	12R,12L	12R,12L	IFR2	1990 Demand and Mix	Future	A/F Development
74	ASM	30R,30L	30R,30L	VFR	1990 Demand and Mix	Future	A/F Development
75	ASM	30R,30L	30R,30L	IFR1	1990 Demand and Mix	Future	A/F Development
76	ASM	30R,30L	30R,30L	IFR2	1990 Demand and Mix	Future	A/F Development
77	ASM	30R,30L,24	30R,30L	IFR1	1990 Demand and Mix	Future	A/F Development
78	ASM	12R,12L	12R,12L,6	IFR1	1990 Demand and Mix	Future	A/F Development
79	ASM	12R,12L,17	12R,12L	IFR1	1990 Demand and Mix	Future	A/F Development

a. Airfield Simulation Model.

b. 1979 ATC Separations for VFR and IFR are taken from FAA Document 78-8A.

c. 1990 ATC Separations for VFR and IFR are taken from FAA Document 78-8A.

Table 1a

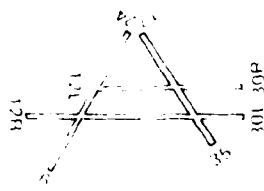
DESCRIPTION OF EXPERIMENTS
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

Experiment number	Model	Demand	Improvements	ATC
81	ADM ^a	1979 Demand and Mix	Baseline	Present ^b
81a	ADM	1979 Demand and Mix	Airfield Development	Present
82	ADM	1985 Demand and Mix	Baseline	Present
83	ADM	1985 Demand and Mix	Airfield Development	Present
84	ADM	1985 Demand and Mix	LDA Approach Procedures	Present
85	ADM	1985 Increase Heavy Mix	A/F Development	Present
86	ADM	1985 Decreased GA Mix	A/F Development	Present
87	ADM	1990 Demand and Mix	Baseline	Present
88	ADM	1990 Demand and Mix	Airfield Development	Present
89	ADM	1990 Demand and Mix	LDA Approach Procedures	Present
90	ADM	1990 Increase Heavy Mix	Airfield Development	Present
91	ADM	1990 Decrease GA Mix	Airfield Development	Present ^c
92	ADM	1990 Demand and Mix	Airfield Development	Future ^c
93	ADM	1990 Increase Heavy Mix	Airfield Development	Future
94	ADM	1990 Decrease GA Mix	Airfield Development	Future

a. Annual Delay Model.

b. 1979 ATC Separations for VFR and IFR are taken from FAA Document 78-8A.

c. 1990 ATC Separations for VFR and IFR are taken from FAA Document 78-8A.



		PRE																	
		1979 DEMAND 1979 MIX						1985 DEMAND											
								1985 MIX						INCREASE HEAVY					
		BASELINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASELINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASELINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION		
	VER	1	14					26	35		44								
	IFR1	2	15					27	36										
	IFR2+3	3						28											
	VER	4	16					29	37										
	IFR1	5	17	23				30	38	41				45	47				48
	IFR2+3	6						31											
	VER	7A	18A	24A															
	IFR1	7	18	24				32	39	42				46					49
	IFR2+3																		
	VER	8	19																
	IFR1	9	20	25				33	40	43									
	IFR2+3	10																	
	VER																		
	IFR1																		
	IFR2+3	11																	
	VER	12	21																
	IFR1	13	22					34											
	IFR2+3																		
ANNUAL AVERAGE	ALL	81	81A					82	83	84				85					86

BASELINE INCLUDES PHYSICAL IMPROVEMENTS IN PLACE IN 1979 AND
ADDITIONAL GATES NECESSARY TO ACCOMMODATE FUTURE DEMAND

LAMBERT ST. LOUIS INTERNATIONAL AIRPORT EXPERIMENTAL DESIGN (DRAFT)

Airport Improvement Task Force Delay Studies

Peat, Marwick, Mitchell & Co. February 1980

PRESENT ATC																													
					1990 DEMAND															1979 DEMAND									
DECREASE GA					1990 MIX					INCREASE HEAVY					DECREASE GA					1979 MIX									
A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASLINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION	MIDCOAST		BASLINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASLINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASLINE	A/F DEVELOPMENT	LDA APPROACH	TERMINAL EXPANSION			BASLINE
						51		63	64																				
						52																							
						53																							
						54																							
48	50					55	60					65	67					68	70										
						56																							
49						57	61					66						69											
						58	62																						
																		69A											
									64A																				
						59																							
86						87	88	89				90						91											

4

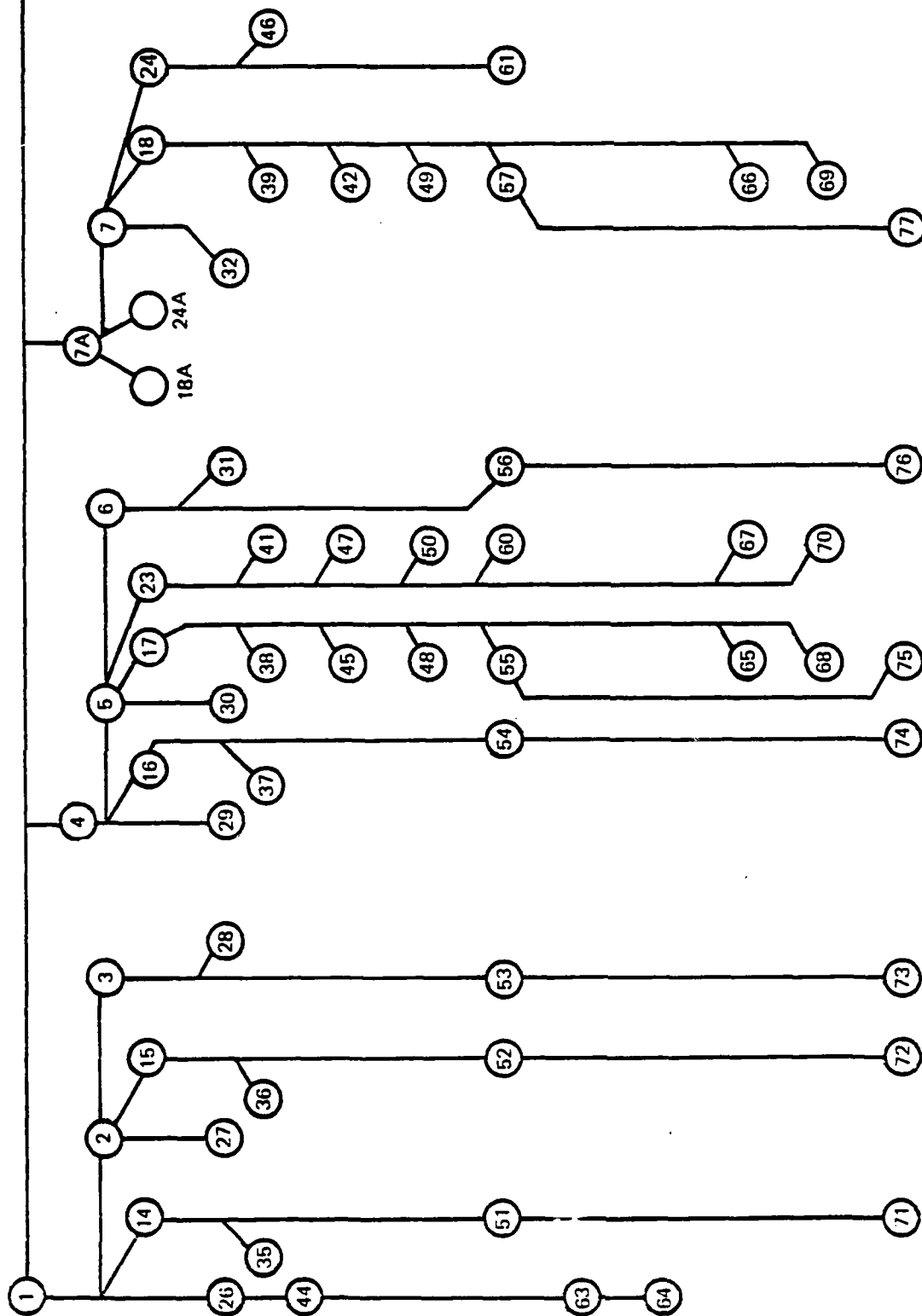


Exhibit 1A
 Lambert—St. Louis International Airport
 RELATION OF EXPERIMENTS TO EACH OTHER
 Peat, Marwick, Mitchell & Co. March 1980

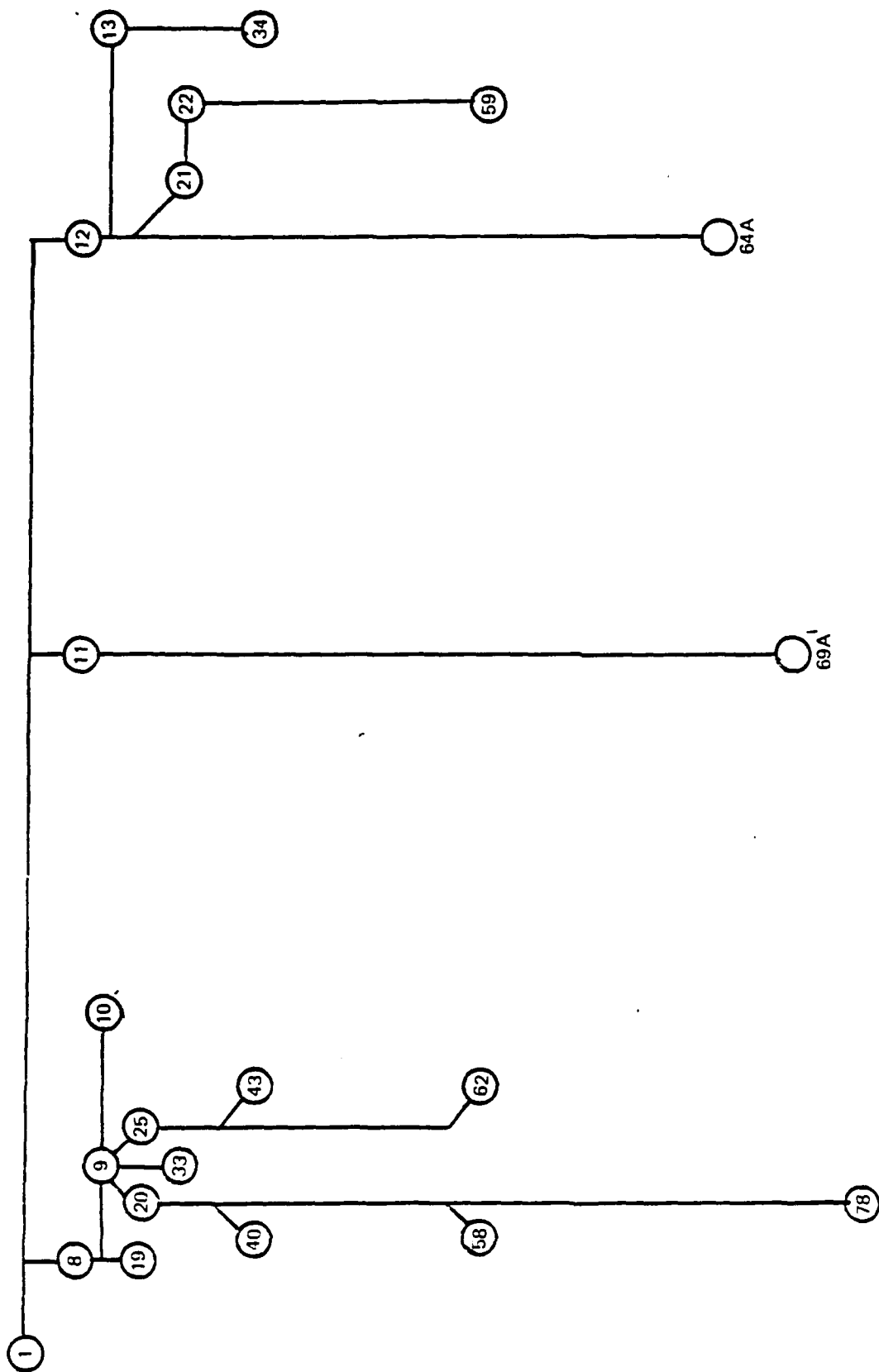


Exhibit 1B
Lambert—St. Louis International Airport
RELATION OF EXPERIMENTS TO EACH OTHER
Peat, Marwick, Mitchell & Co. March 1980

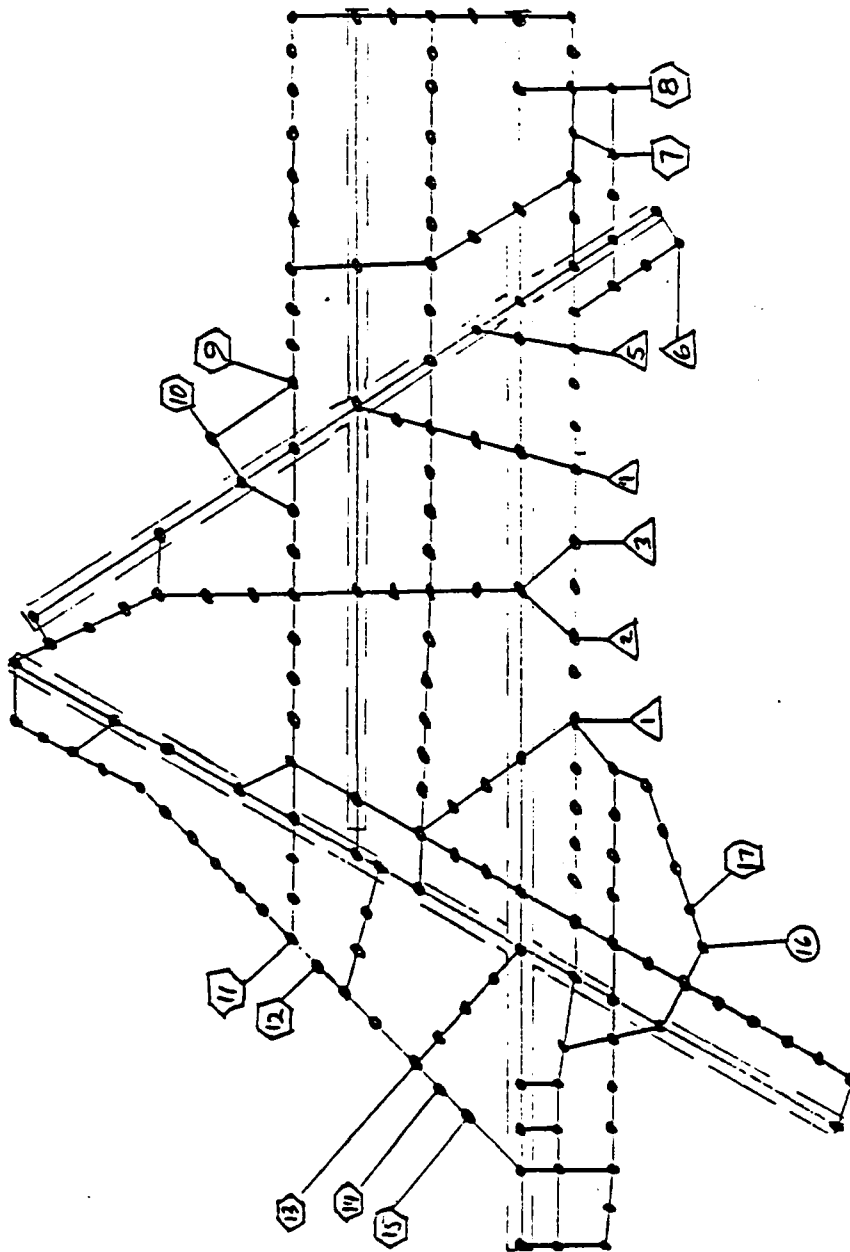


Exhibit 4

Lambert-St. Louis International Airport

LINK-NODE DIAGRAM
PRESENT CONFIGURATION

Peat, Marwick, Mitchell & Co. March 1980

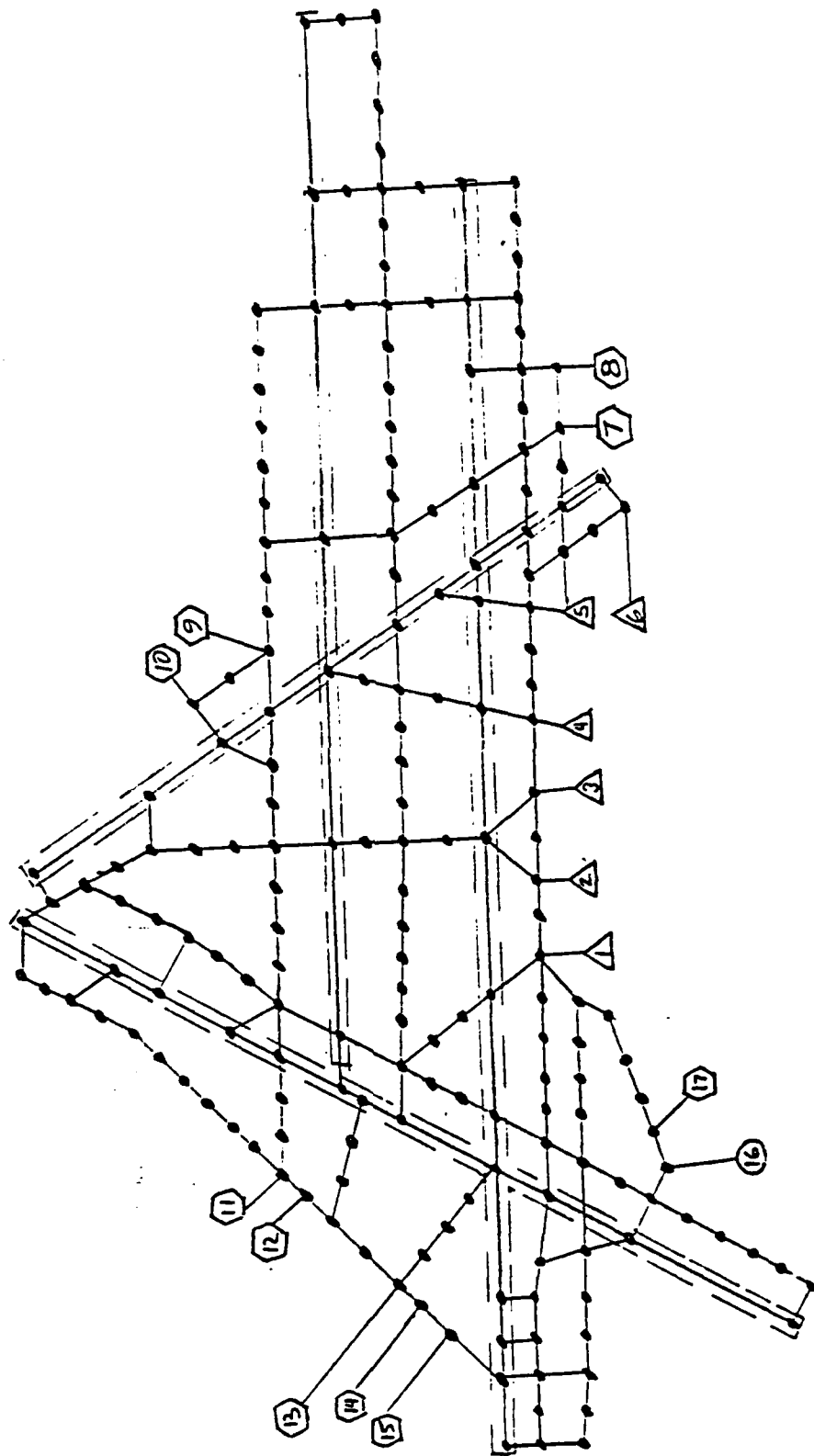


Exhibit 5
Lambert-St. Louis International Airport
LINK-NODE DIAGRAM
AIRFIELD IMPROVEMENTS
Peat, Marwick, Mitchell & Co. March 1980

The following schedule (Table 2) was used to calibrate the Airfield Simulation Model for use at Lambert-St. Louis International Airport.

<u>Card column</u>	<u>Data item</u>
3-4	Airline code
11-12	Flight number (not used)
15-16	Terminal gate code
24	Flight type (unspecified)
32	Aircraft class
	1-Widebodies
	2-Large passenger jets
	3-Props and small jets
	4-Single-engine props
36-37	Arrival time (hours and minutes)
39-40	
44-45	Departure time (hours and minutes)
47-48	
56	Arrival runway
64	Arrival fix code
72	Departure runway
80	Departure fix code

Table 2

A-12

SCHEDULE FOR ST. LOUIS CALIBRATION RUN
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

GA	99	7	0	3	0	0	15	33	0	0	1	9
GA	99	8	0	3	0	0	15	37	0	0	2	9
GA	99	7	0	3	0	0	15	40	0	0	1	9
GA	99	7	0	4	0	0	15	42	0	0	2	9
GA	99	6	0	2	0	0	15	45	0	0	1	9
GA	99	6	0	3	0	0	15	47	0	0	2	9
OZ	99	13	0	3	0	0	15	48	0	0	1	9
GA	99	7	0	3	0	0	15	47	0	0	2	9
FL	99	2	0	2	0	0	15	48	0	0	1	9
OZ	99	6	0	3	0	0	15	56	0	0	1	9
GA	99	7	0	3	0	0	15	57	0	0	2	9
OZ	99	13	0	3	0	0	15	58	0	0	1	9
TW	99	1	0	2	0	0	16	0	0	0	1	9
FA	99	4	0	2	0	0	16	2	0	0	1	9
GA	99	8	0	3	0	0	16	5	0	0	2	9
SO	99	1	0	2	0	0	16	7	0	0	1	9
GA	99	8	0	3	0	0	16	6	0	0	2	9
GA	99	7	0	4	0	0	16	7	0	0	2	9
GA	99	7	0	4	0	0	16	8	0	0	2	9
GA	99	7	0	3	0	0	16	9	0	0	1	9
GA	99	7	0	3	0	0	16	11	0	0	2	9
DL	99	3	0	2	0	0	16	13	0	0	1	9
GA	99	7	0	3	0	0	16	16	0	0	1	9
GA	99	7	0	3	0	0	16	17	0	0	2	9
GA	99	9	0	2	0	0	16	19	0	0	1	9
GA	99	7	0	3	0	0	16	20	0	0	2	9
TW	99	2	0	2	0	0	16	27	0	0	1	9
GA	99	7	0	3	0	0	16	26	0	0	2	9
DL	99	3	0	2	0	0	16	27	0	0	1	9
GA	99	7	0	3	0	0	16	26	0	0	2	9
OZ	99	6	0	2	0	0	16	28	0	0	1	9
TW	99	2	0	2	0	0	16	29	0	0	1	9
GA	99	7	0	3	0	0	16	31	0	0	2	9
AA	99	3	0	2	0	0	16	32	0	0	1	9
GA	99	8	0	4	0	0	16	35	0	0	2	9
GA	99	7	0	3	0	0	16	34	0	0	2	9
AA	99	4	0	2	0	0	17	15	0	0	1	9
GA	99	7	0	3	0	0	16	36	0	0	2	9
GA	99	7	0	3	0	0	16	37	0	0	2	9
FA	99	4	0	2	0	0	17	15	0	0	1	9
FA	99	4	0	2	0	0	16	39	0	0	1	9
GA	99	7	0	3	0	0	16	40	0	0	2	9
GA	99	7	0	3	0	0	16	41	0	0	2	9
AA	99	4	0	2	0	0	16	45	0	0	1	9
GA	99	6	0	2	0	0	16	42	0	0	2	9
GA	99	8	0	4	0	0	16	44	0	0	2	9
TW	99	1	0	2	0	0	16	47	0	0	1	9
GA	99	7	0	4	0	0	16	48	0	0	2	9
AA	99	3	0	2	0	0	17	15	0	0	1	9
TV	99	1	0	2	0	0	16	50	0	0	1	9
GA	99	12	0	2	0	0	16	51	0	0	1	9
TW	99	1	0	2	0	0	16	54	0	0	1	9
SO	99	2	0	2	0	0	16	56	0	0	1	9
GA	99	8	0	3	0	0	16	55	0	0	2	9
TW	99	2	0	2	0	0	16	57	0	0	1	9
GA	99	8	0	3	0	0	17	0	0	0	2	9
GA	99	12	0	2	0	0	17	0	0	0	1	9
TW	99	2	0	2	0	0	17	1	0	0	1	9

Table 2 (continued)

SCHEDULE FOR ST. LOUIS CALIBRATION RUN
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

OZ	99	13	0	2	0	0	17	6	0	0	1
GA	99	10	0	3	0	0	17	9	0	0	2
OZ	99	6	0	2	0	0	17	10	0	0	1
OZ	99	6	0	2	0	0	17	11	0	0	1
OZ	99	6	0	2	0	0	17	20	0	0	1
GA	99	4	0	3	0	0	17	21	0	0	2
OZ	99	6	0	2	0	0	17	23	0	0	1
OZ	99	6	0	2	0	0	17	23	0	0	1
TW	99	1	0	1	0	0	17	22	0	0	1
GA	99	7	0	3	0	0	17	23	0	0	2
GA	99	7	0	3	0	0	17	23	0	0	2
GA	99	7	0	3	0	0	17	24	0	0	2
GA	99	7	0	3	0	0	17	24	0	0	2
GA	99	3	0	3	0	0	17	26	0	0	2
AA	99	3	0	2	0	0	17	31	0	0	1
GA	99	7	0	3	0	0	17	28	0	0	1
AL	99	4	0	2	0	0	17	30	0	0	1
AA	99	3	0	2	0	0	17	31	0	0	1
TW	99	1	0	2	0	0	17	36	0	0	1
AA	99	3	0	2	0	0	17	33	0	0	1
GA	99	7	0	3	0	0	17	33	0	0	2
FL	99	2	0	3	0	0	17	36	0	0	2
GA	99	7	0	3	0	0	17	40	0	0	2
AA	99	3	0	2	0	0	17	40	0	0	1
TW	99	2	0	2	0	0	17	43	0	0	1
TW	99	2	0	2	0	0	17	42	0	0	1
TW	99	2	0	2	0	0	17	44	0	0	1
AA	99	3	0	2	0	0	17	45	0	0	1
GA	99	8	0	3	0	0	17	46	0	0	2
DL	99	4	0	2	0	0	17	47	0	0	2
AA	99	3	0	2	0	0	17	49	0	0	1
OZ	99	6	0	3	0	0	17	49	0	0	1
AA	99	3	0	2	0	0	17	51	0	0	1
GA	99	7	0	3	0	0	17	50	0	0	2
DL	99	4	0	2	0	0	17	54	0	0	1
GA	99	7	0	3	0	0	17	55	0	0	2
GA	99	7	0	3	0	0	17	58	0	0	2
GA	99	7	0	3	0	0	17	59	0	0	1
GA	99	7	0	3	0	0	18	2	0	0	2
GA	99	7	0	3	0	0	18	7	0	0	1
DL	99	4	0	2	0	0	18	9	0	0	2
GA	99	7	0	3	0	0	18	10	0	0	1
GA	99	7	0	3	0	0	18	15	0	0	2
GA	99	4	0	3	0	0	18	18	0	0	2
NW	99	6	0	2	0	0	16	53	0	0	1
GA	99	7	0	3	0	0	16	58	0	0	2
GA	99	7	0	3	0	0	17	11	0	0	2
FA	99	4	0	2	0	0	16	58	0	0	1
AL	99	4	0	2	0	0	17	17	0	0	1
GA	99	7	0	3	0	0	17	11	0	0	2
GA	99	7	0	3	0	0	17	16	0	0	2
AL	99	4	0	2	0	0	18	16	0	0	1
GA	99	7	0	3	0	0	18	16	0	0	2
FA	99	3	0	2	17	25	0	0	1	1	0
GA	99	7	0	2	17	29	0	0	2	1	0
DL	99	3	0	2	17	30	0	0	1	1	0
GA	99	7	0	2	17	34	0	0	2	2	0
OZ	99	4	0	2	17	37	0	0	1	1	0
TW	99	13	0	2	17	38	0	0	2	2	0

Table 2 (continued)

SCHEDULE FOR ST. LOUIS CALIBRATION RUN
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

AL	99	4	0	2	17	40	0	0	1	1	0
TW	99	1	0	1	17	45	0	0	1	1	0
GA	99	4	0	3	18	6	0	0	2	3	0
TW	99	13	0	2	17	46	0	0	2	1	0
TW	99	1	0	2	17	47	0	0	1	1	0
DL	99	2	0	2	17	49	0	0	1	1	0
TW	99	1	0	2	17	52	0	0	2	1	0
TW	99	1	0	2	17	55	0	0	1	1	0
GA	99	7	0	3	17	58	0	0	1	1	0
GA	99	7	0	3	18	5	0	0	1	3	0
OZ	99	4	0	2	17	58	0	0	1	3	0
TW	99	2	0	2	17	59	0	0	1	1	0
GA	99	7	0	3	18	4	0	0	2	3	0
GA	99	7	0	3	18	9	0	0	2	1	0
GA	99	7	0	3	18	6	0	0	1	3	0
TW	99	2	0	2	18	7	0	0	1	2	0
GA	99	3	0	3	18	13	0	0	1	2	0
OZ	99	13	0	2	18	8	0	0	1	1	0
GA	99	7	0	3	18	29	0	0	2	3	0
FA	99	4	0	1	18	12	0	0	1	2	0
FL	99	1	0	2	18	11	0	0	1	4	0
TW	99	4	0	2	18	16	0	0	1	2	0
FL	99	1	0	3	18	16	0	0	1	3	0
TW	99	1	0	2	18	16	0	0	1	3	0
GA	99	7	0	3	15	42	0	0	1	9	0
TW	99	1	0	2	15	40	0	0	1	9	0
GA	99	7	0	3	15	44	0	0	1	9	0
GA	99	8	0	2	15	45	0	0	1	9	0
SO	99	1	0	2	15	47	0	0	1	9	0
GA	99	7	0	3	15	51	0	0	2	9	0
AA	99	2	0	2	16	1	0	0	1	9	0
GA	99	8	0	3	15	59	0	0	2	9	0
GA	99	6	0	3	16	1	0	0	2	9	0
GA	99	7	0	3	16	9	0	0	2	9	0
GA	99	7	0	3	16	22	0	0	2	9	0
GA	99	7	0	3	17	3	0	0	2	9	0
GA	99	9	0	2	17	20	0	0	1	9	0
GA	99	9	0	2	17	37	0	0	1	9	0
GA	99	7	0	3	17	40	0	0	2	9	0
GA	99	4	0	2	18	12	0	0	1	9	0
AA	99	1	0	2	15	45	0	0	1	3	0
DL	99	3	0	2	15	50	0	0	1	2	0
AA	99	3	0	2	15	48	0	0	1	3	0
TW	99	13	0	2	15	50	0	0	1	3	0
TW	99	1	0	2	15	57	0	0	1	2	0
OZ	99	6	0	2	15	55	0	0	1	3	0
AA	99	2	0	2	15	56	0	0	1	3	0
DL	99	4	0	2	16	0	0	0	1	1	0
AA	99	2	0	2	16	0	0	0	1	3	0
FA	99	3	0	2	16	2	0	0	1	4	0
GA	99	7	0	3	16	8	0	0	1	1	0
OZ	99	2	0	3	16	12	0	0	1	4	0
GA	99	7	0	3	16	17	0	0	2	1	0
AL	99	4	0	2	16	13	0	0	1	1	0
TW	99	1	0	2	16	15	0	0	1	3	0
TW	99	13	0	2	16	16	0	0	1	3	0
TW	99	1	0	2	16	17	0	0	1	3	0
OZ	99	6	0	2	16	20	0	0	1	2	0

Table 2 (continued)

SCHEDULE FOR ST. LOUIS CALIBRATION RUN
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

TW	99	2	0	1	16 20	0	0	1	3	0
GA	99	3	0	3	16 41	0	0	2	3	0
TW	99	2	0	2	16 24	0	0	1	3	0
SO	99	1	0	2	16 29	0	0	1	2	0
GA	99	7	0	3	16 46	0	0	2	2	0
TW	99	1	0	2	16 37	0	0	1	2	0
AA	99	3	0	2	16 37	0	0	1	1	0
AA	99	3	0	2	16 42	0	0	1	1	0
OZ	99	1	0	2	16 40	0	0	1	4	0
OZ	99	6	0	2	16 42	0	0	1	4	0
AL	99	4	0	2	16 43	0	0	1	1	0
AA	99	2	0	2	16 49	0	0	1	1	0
OZ	99	1	0	3	16 51	0	0	1	4	0
GA	99	10	0	3	16 57	0	0	2	4	0
GA	99	7	0	3	16 59	0	0	2	2	0
GA	99	7	0	3	16 57	0	0	1	4	0
AA	99	2	0	2	16 59	0	0	1	1	0
GA	99	7	0	3	17 20	0	0	2	3	0
GA	99	7	0	3	17 23	0	0	2	3	0
TW	99	6	0	2	17 5	0	0	1	2	0
TW	99	1	0	2	17 2	0	0	1	3	0
FL	99	2	0	3	17 4	0	0	1	3	0
GA	99	7	0	3	17 18	0	0	2	2	0
GA	99	7	0	3	17 8	0	0	2	4	0
GA	99	7	0	3	17 12	0	0	2	2	0
GA	99	7	0	3	17 11	0	0	2	4	0
TW	99	1	0	2	17 17	0	0	2	1	0
DL	99	3	0	2	17 19	0	0	2	2	0
OZ	99	6	0	3	17 23	0	0	2	2	0
GA	99	-10	0	3	17 34	0	0	2	3	0

LAMBERT EXPERIMENTAL DESIGN

Peat, Marwick, Mitchell & Co.
March 1980

Question	Relevant Experiments
1. Airport Development	1 and 14, 2 and 15, etc.
2. +20%, +40%	14 and 35, 14 and 51, etc.
3. Mixes A and B	38 and 45, 38 and 48, etc.
4. Future ATC	51 and 71, 54 and 74, etc.
5. LDA	17 and 23, 18 and 24, etc.
6. Reduced GA	Mix B
7. 17/35	1 and 12, 14 and 21, etc.
8. Terminal Expansion	35 and 44, 51 and 63, etc.
9. Optimum Runway Use	All
10. Extend West	Most
11. 30/24	5 and 7, 17 and 18, etc.
Airline Gate Service Times - 1979	All
A/C Lateness Distribution - 1979	All
Schedule-1979 Demand and Mix	All
Runway Crossing Times	Experiment 4, 12
Crossing Links B, 17-35, J, B, 17-35, Midcoast, F, K, A	
Gate Hold Controls	Experiment 14
Departure Queue Controls	Experiment 14
Exit Taxiway Utilization - A/F Development	Experiment 14
Arrival Runway Occupancy Time - Airfield Development	Experiment 14
Exit Utilization in IFR2	Experiment 3
Airfield Network With Relocated Midcoast	Experiments 64, 64a
GA Basing Areas	All

Attachment B

INPUT DATA SUMMARY

SIX BASELINE SCENARIOS - AIRFIELD SIMULATION

Lambert-St. Louis International Airport

St. Louis
Airport Improvement Task Force Delay Studies

Prepared by

Peat, Marwick, Mitchell & Co.
San Francisco, California

March 1980

Attachment B

INPUT DATA SUMMARY
SIX BASELINE SCENARIOS--AIRFIELD SIMULATION

Summaries of the data inputs necessary to run the airfield simulation model have been included for the following experiments:

- Experiment 1--Arrivals and Departures on Runways 12R and 12L, VFR Baseline, 1979 Demand and Mix, Present ATC Procedures
- Experiment 4--Arrivals and Departures on Runways 30R and 30L, VFR Baseline, 1979 Demand and Mix, Present ATC Procedures
- Experiment 7A--Arrivals on Runways 30R, 30L, and 24, Departures on Runways 30R and 30L, VFR Baseline, 1979 Demand and Mix, Present ATC Procedures
- Experiment 8--Arrivals on Runways 12R and 12L, Departures on Runways 12R, 12L, and 6, VFR Baseline, 1979 Demand and Mix, Present ATC Procedures
- Experiment 11--Arrivals and Departures on Runway 24, IFR2 Baseline, 1979 Demand and Mix, Present ATC Procedures
- Experiment 12--Arrivals on Runways 12R, 12L, and 17, Departures on Runways 12R and 12L, VFR Baseline, 1979 Demand and Mix, Present ATC Procedures

Experiment 1--Runways 12R and 12L
VFR Baseline
1979 Demand and Mix
Present ATC Procedures

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 1
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names: AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: \pm 2 standard deviations
8. Time Switch: Not applicable

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1
10. Number of Runways: 2
11. Runway Identification: 12R and 12L
12. Departure Runway End Links: 12R and 12L

13. Runway Crossing Links (seconds):

Runway	Crossing link	Crossing times											
		D	C	B	A	D	C	B	A	D	C	B	A
12R	R	83	57	60	72	47	47	42	42	20	20	20	20
12R	G	55	55	60	72	40	40	42	42	20	20	20	20
12R	E	34	34	42	50	27	27	29	32	20	20	20	20
12R	Midcoast	67	57	60	72	43	43	42	42	20	20	20	20
12R	C	20	20	25	30	16	16	18	20	20	20	20	20
12L	17-35	20	20	25	30	16	16	18	20	20	20	20	20

14. Exit Taxiway Locations:

Runway	Exit	Feet from threshold
12R	R	9,590
12R	17-35	7,280
12R	J	6,975
12R	G	6,005
12R	B	4,910
12R	E	3,510
12L	R	6,630
12L	P	4,560
12L	G	3,465
12L	17-35	3,465
12L	B	1,945

15. Holding Area-Link Number: 47

16. <u>Airline Gates:</u>	American -	3
	Braniff -	1
	Delta -	2
	Eastern -	1,2
	Frontier -	4
	Northwest Orient -	6
	US Air -	1
	Ozark -	6
	Republic -	5
	TWA -	5
	Air Taxi -	1,3
	Air Freight -	6
	Supplemental -	6

17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-VFR (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.7	2.9	3.0	3.1
	B	2.7	2.9	3.0	3.1
	C	3.5	3.7	3.0	3.1
	D	5.3	5.5	4.7	3.9

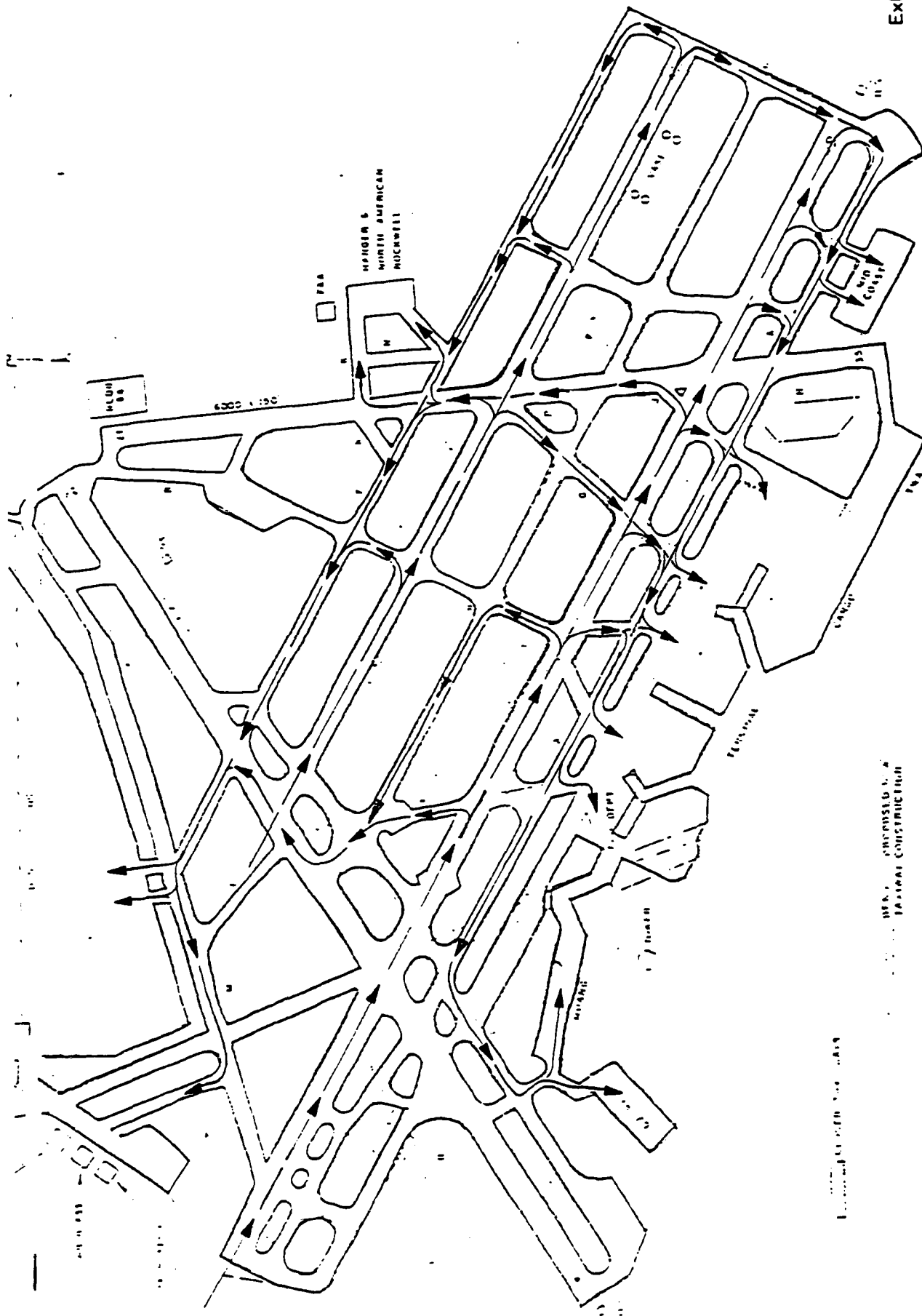
Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	30	30	45	50
	B	35	40	45	50
	C	45	45	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	1.11	1.4	1.7	1.83
	B	1.11	1.4	1.7	1.83
	C	1.11	1.4	1.7	1.83
	D	1.11	1.4	1.7	1.83

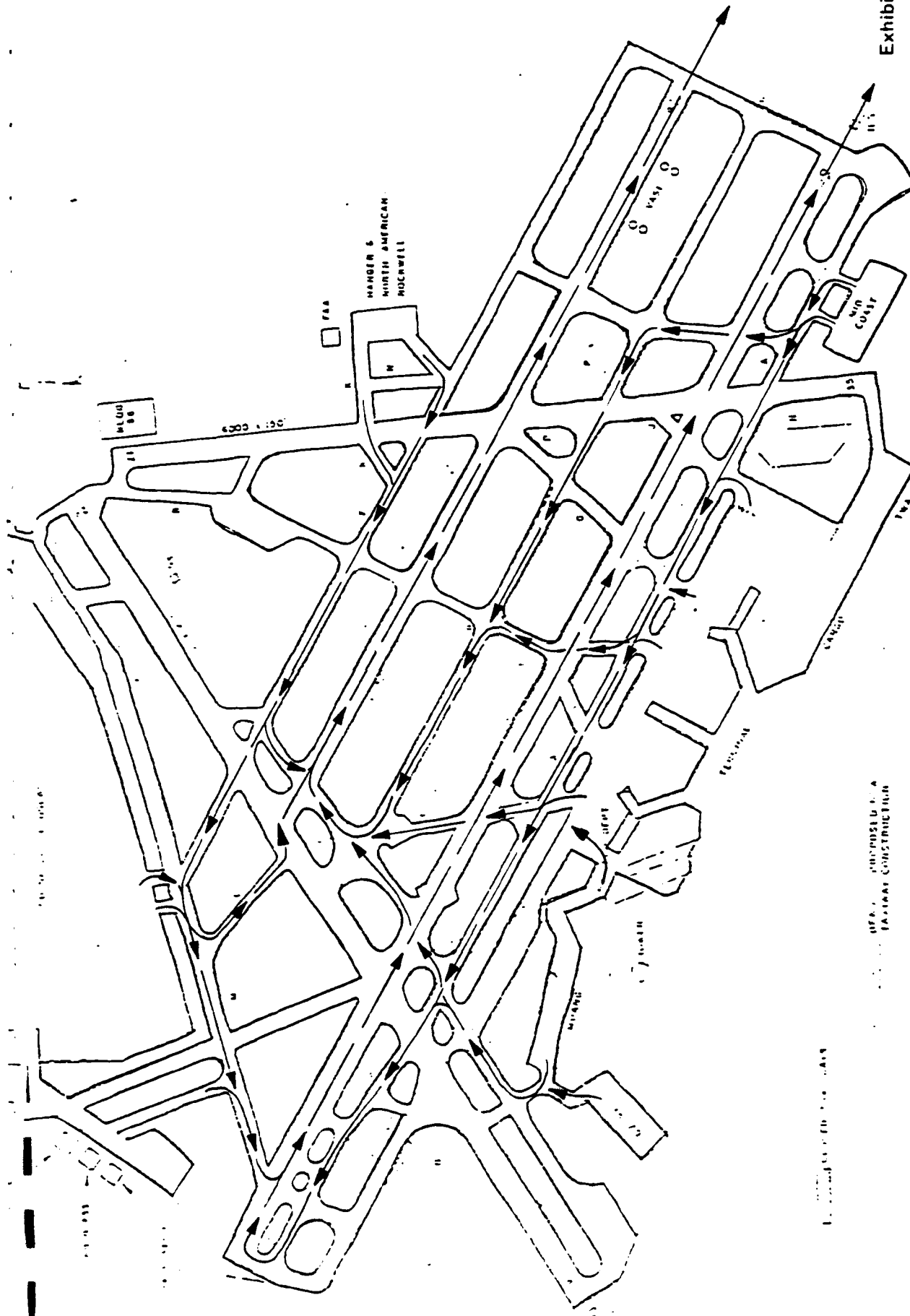
19. Route Data: See Figures 6a and 6b.20. Two-Way Path Data: See Figures 6a and 6b.



RECOMMENDED FOR CONSTRUCTION

Exhibit 6A
Lambert—St. Louis International Airport
PRESENT CONFIGURATION
FLOW DIAGRAM
DEPARTURES ON RUNWAYS 12R AND 12L

Peat, Marwick, Mitchell & Co., Inc. March 1980
LMA 922 242-1-11



DETAILED PRELIMINARY
FAIRWAY CONSTRUCTION

Exhibit 6B
Lambert-St. Louis International Airport

**PRESENT CONFIGURATION
FLOW DIAGRAM
DEPARTURES ON RUNWAYS 12R AND 12L**

Peat, Marwick, Mitchell & Co., Inc. March 1980
C 13300 11111
ANA 922 0020111

21. Common Approach Paths:

	<u>Aircraft class</u>	<u>Length (nautical miles)</u>
VFR	A	2.0
	B	2.0
	C	6.0
	D	6.0

22. Vectoring Delays: Report sum of speed control, vectoring, and holding delay as one total.

23. Departure Runway Queue Control: Not used.

24. Gate Hold Control: When Runway 12L queue exceeds 6, when Runway 12R queue exceeds 10.

25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.

26. Runway Interarrival Gap: Arrival separations increase from those specified in No. 18 to 8 miles when departure queue exceeds 6 on Runway 12R and exceeds 4 on Runway 12L.

27. Runway Crossing Delay Control: Arrival separations increase from those in No. 18 to 5 miles when crossing queue exceeds 4 on Runway 12R and exceeds 2 on Runway 12L.

28. Exit Taxiway Utilization (percent):

<u>Runway</u>	<u>Class</u>	<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B</u>	<u>E</u>
12R	A					67	33
	B		17	6	13	46	18
	C		14	17	39	28	2
	D	5	10	29	43	14	
		<u>R</u>	<u>P</u>	<u>G</u>	<u>17-35</u>	<u>B</u>	
12L	A			99		1	
	B	10	9	32	42	7	
	C	25	54	17	4		
	D	100					

29. Arrival Runway Occupancy Times (seconds):

<u>Runway</u>	<u>Class</u>	<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B</u>	<u>E</u>	<u>Weighted average</u>
12R	A					72	53	66
	B		60	60	53	50	44	52
	C		57	56	50	41	38	50
	D	83	61	54	57	40		56

		<u>R</u>	<u>P</u>	<u>G</u>	<u>17-35</u>	<u>B</u>	<u>Weighted average</u>
12L	A			48		48	48
	B	80	61	48	47	40	51
	C	65	42	42	32		46
	D	65					65

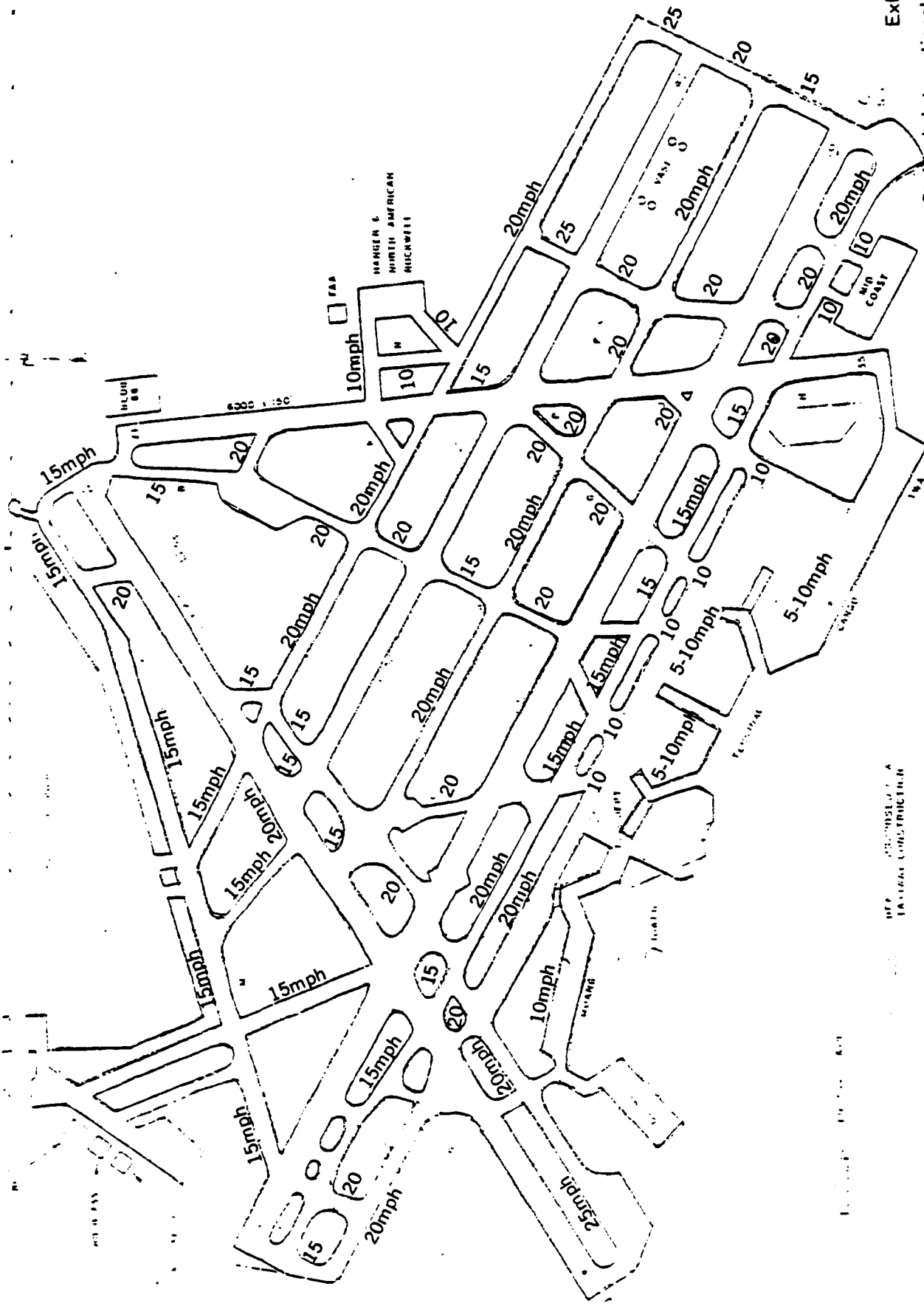
30. Touch and Go Occupancy Times: No touch and go's.31. Departure Runway Occupancy Times (seconds):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35 (Figure 6c).33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

34. Gate Service Times: To be supplied by airport task force.35. Airspace Travel Times: See Table 3.36. Runway Crossing Times: 20 seconds.37. Lateness Distribution: To be supplied by airport task force.38. Schedule: 1979 Demand and Mix.



OFFICE OF THE
AIRPORT CONSTRUCTION

Exhibit 6C

Lambert-St. Louis International Airport

**GENERALIZED TAXIWAY SPEEDS FOR
ARRIVALS AND DEPARTURES ON
RUNWAYS 12R AND 12L**

Peat, Marwick, Mitchell & Co., March 1980

100-1000
100-1000
100-1000

Table 3

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 1
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
12R	K	1	13.0
12R	K	2	13.0
12R	K	3	15.0
12R	K	4	--
12R	B	1	13.0
12R	B	2	13.5
12R	B	3	16.5
12R	B	4	17.0
12R	F	1	11.0
12R	F	2	11.0
12R	F	3	11.5
12R	F	4	--
12R	V	1	11.0
12R	V	2	11.0
12R	V	3	11.5
12R	V	4	--
12L	K	1	--
12L	K	2	13.0
12L	K	3	14.5
12L	K	4	17.0
12L	B	1	--
12L	B	2	13.0
12L	B	3	14.5
12L	B	4	--
12L	F	1	--
12L	F	2	11.0
12L	F	3	15.5
12L	F	4	15.5
12L	V	1	--
12L	V	2	10.0
12L	V	3	14.5
12L	V	4	14.5

Experiment 4--Runways 30R and 30L
VFR Baseline
1979 Demand and Mix
Present ATC Procedures

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 4
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names: AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: ± 2 standard deviations
8. Time Switch: Not applicable

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1
10. Number of Runways: 2
11. Runway Identification: 30R and 30L
12. Departure Runway End Links: 30R and 30L

13. Runway Crossing Links (seconds):

Runway	Crossing link	Crossing times											
		<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>	<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>	<u>D</u>	<u>C</u>	<u>B</u>	<u>A</u>
30R	B									20	20	29	20
30R	17-35				To be provided					20	20	20	20
30L	B				To be provided					20	20	20	20
30L	E	34	34	42	50	27	27	29	32	20	20	20	20
30L	G	55	55	60	72	40	40	42	42	20	20	20	20
30L	J												
30L	17-35												
30L	Midcoast				To be provided								

14. Exit Taxiway Locations:

<u>Runway</u>	<u>Exit</u>	<u>Feet from threshold</u>
30R	B	4,745
30R	G	3,325
30R	6-24	6,990
30R	17-35	3,225
30L	A	8,935
30L	6-24	7,780
30L	E	6,200
30L	B-left	4,800
30L	B-right	4,800
30L	G	3,705
30L	J	2,735
30L	17-35	2,430

15. Holding Area-Link Number: 47

16. <u>Airline Gates:</u>	American -	3
	Braniff -	1
	Delta -	2
	Eastern -	1,2
	Frontier -	4
	Northwest Orient -	6
	US Air -	1
	Ozark -	6
	Republic -	5
	TWA -	5
	Air Taxi -	1,3
	Air Freight -	6
	Supplemental -	6

17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-VFR (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.7	2.9	3.0	3.1
	B	2.7	2.9	3.0	3.1
	C	3.5	3.7	3.0	3.1
	D	5.3	5.5	4.7	3.9

Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	30	30	45	50
	B	35	40	45	50
	C	45	45	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	1.11	1.4	1.7	1.83
	B	1.11	1.4	1.7	1.83
	C	1.11	1.4	1.7	1.83
	D	1.11	1.4	1.7	1.83

19. Route Data: See Figures 7a and 7b.

20. Two-Way Path Data: See Figures 7a and 7b.

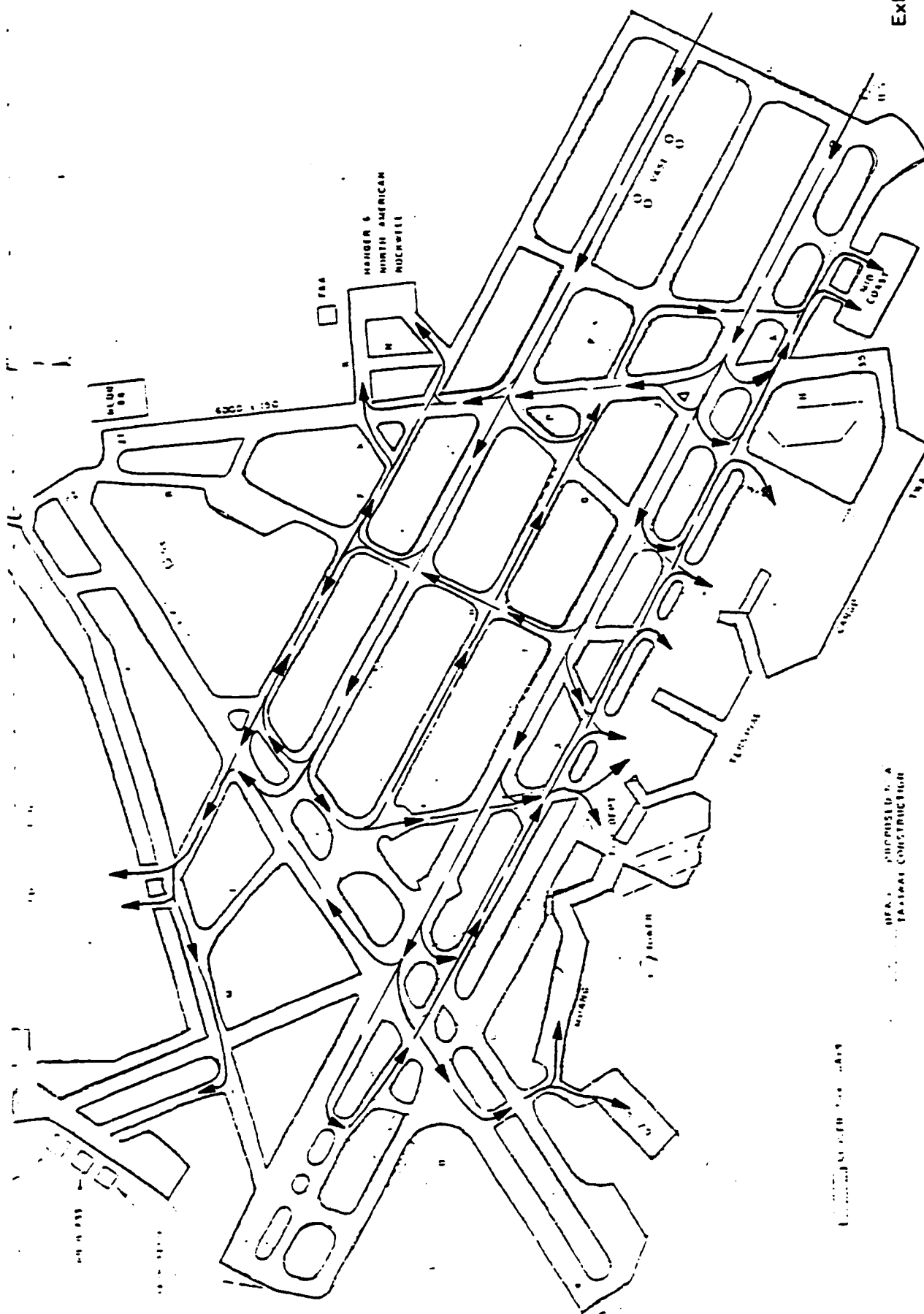


Exhibit 7A

Lambert—St. Louis International Airport

PRESENT CONFIGURATION FLOW DIAGRAM

ARRIVALS ON RUNWAYS 30R AND 30L

Peat, Marwick, Mitchell & Co., March 1980

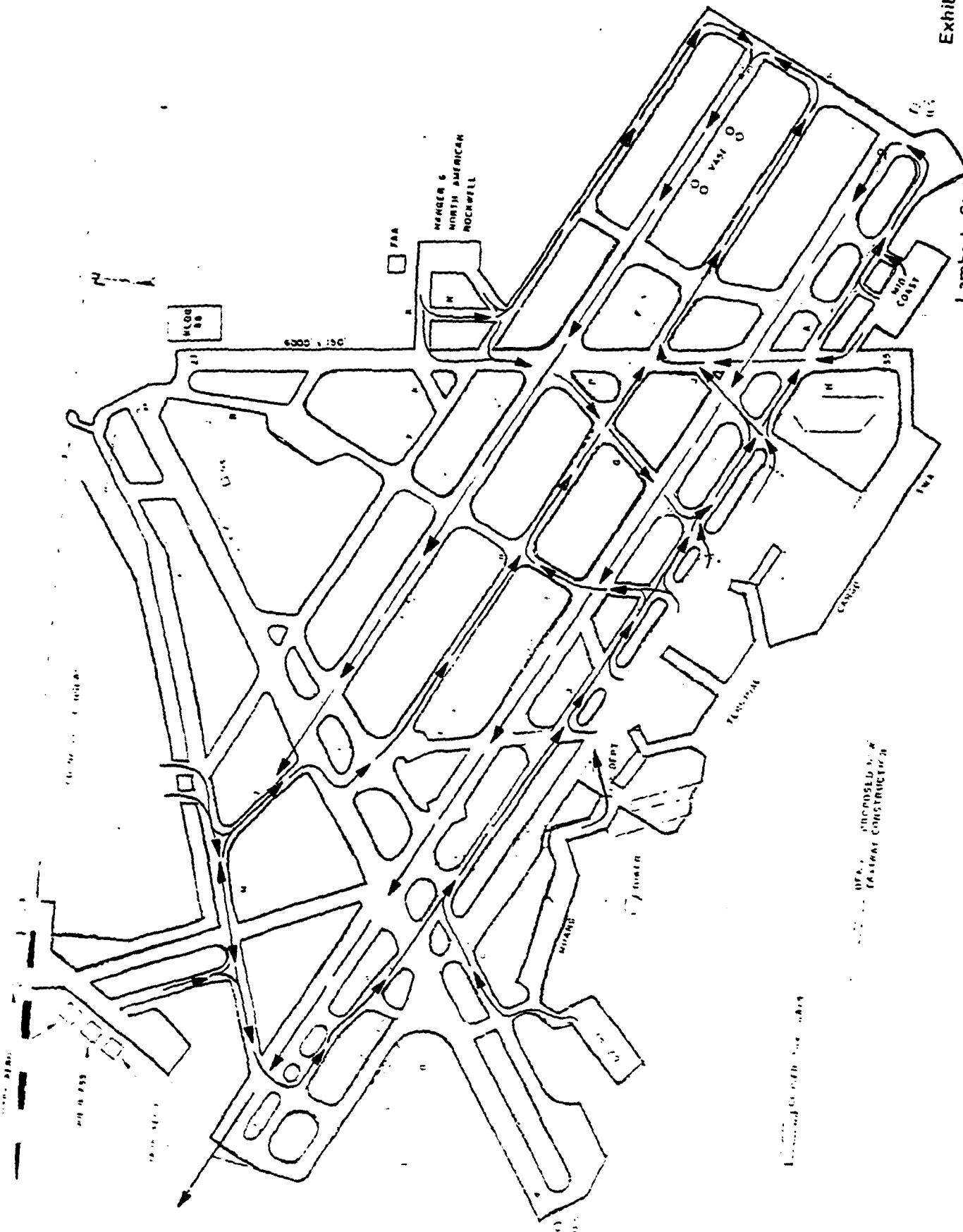
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Exhibit 7B
Lambert-St. Louis International Airport

**PRESENT CONFIGURATION
FLOW DIAGRAM
DEPARTURES ON RUNWAYS 30R AND 30L**

Peat, Marwick, Mitchell & Co., March 1980

CLASSIFIED BY
AND N72



U.S. AIR FORCE
PROPOSED
FUTURE CONSTRUCTION

21. Common Approach Paths:

	<u>Aircraft class</u>	<u>Length (nautical miles)</u>
VFR	A	2.0
	B	2.0
	C	6.0
	D	6.0

22. Vectoring Delays: Report sum of speed control, vectoring, and holding delay as one total.

23. Departure Runway Queue Control: Not used.

24. Gate Hold Control: When Runway 30R queue exceeds 6, when Runway 30L queue exceeds 10.

25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.

26. Runway Interarrival Gap: Arrival separations increase from those specified in No. 18 to 8 miles when departure queue exceeds 6 on Runway 30L and exceeds 4 on Runway 30R.

27. Runway Crossing Delay Control: Arrival separations increase from those in No. 18 to 5 miles when crossing queue exceeds 4 on Runway 30L and exceeds 2 on Runway 30R.

28. Exit Taxiway Utilization (percent):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>			
		<u>B</u>	<u>G</u>	<u>24-6</u>	<u>17-35</u>
30R	A		1		99
	B	41	44	2	13
	C	67	11	22	
	D	100			

<u>Runway</u>	<u>Class</u>	<u>Exit</u>						
		<u>A</u>	<u>6-24</u>	<u>E</u>	<u>B- left</u>	<u>B- right</u>	<u>G</u>	<u>J</u> <u>17-35</u>
30L	A				50			50
	B		9	14	18	9	14	5 32
	C		16	44	28	12		
	D	27	55	18				

29. Arrival Runway Occupancy Times (seconds):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>				<u>Weighted average</u>
		<u>B</u>	<u>G</u>	<u>24-6</u>	<u>17-35</u>	
30R	A				40	40
	B	52	40	87	38	48
	C	45	45	58		48
	D	50				50

	<u>Class</u>	<u>Exit</u>							<u>Weighted average</u>
		<u>A</u>	<u>6-24</u>	<u>E</u>	<u>B- left</u>	<u>B- right</u>	<u>G</u>	<u>J</u> <u>17-35</u>	
30L	A				45			30	38
	B		55	57	44	39	33	25 35	41
	C		61	52	40	41			50
	D	78	56	55					62

30. Touch and Go Occupancy Times: No touch and go's.31. Departure Runway Occupancy Times (seconds):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35
(see Figure 7c).

33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

34. Gate Service Times: To be supplied by airport task force.

35. Airspace Travel Times: See Table 4.

36. Runway Crossing Times: 20 seconds.

37. Lateness Distribution: To be supplied by airport task force.

38. Schedule: 1979 Demand and Mix.

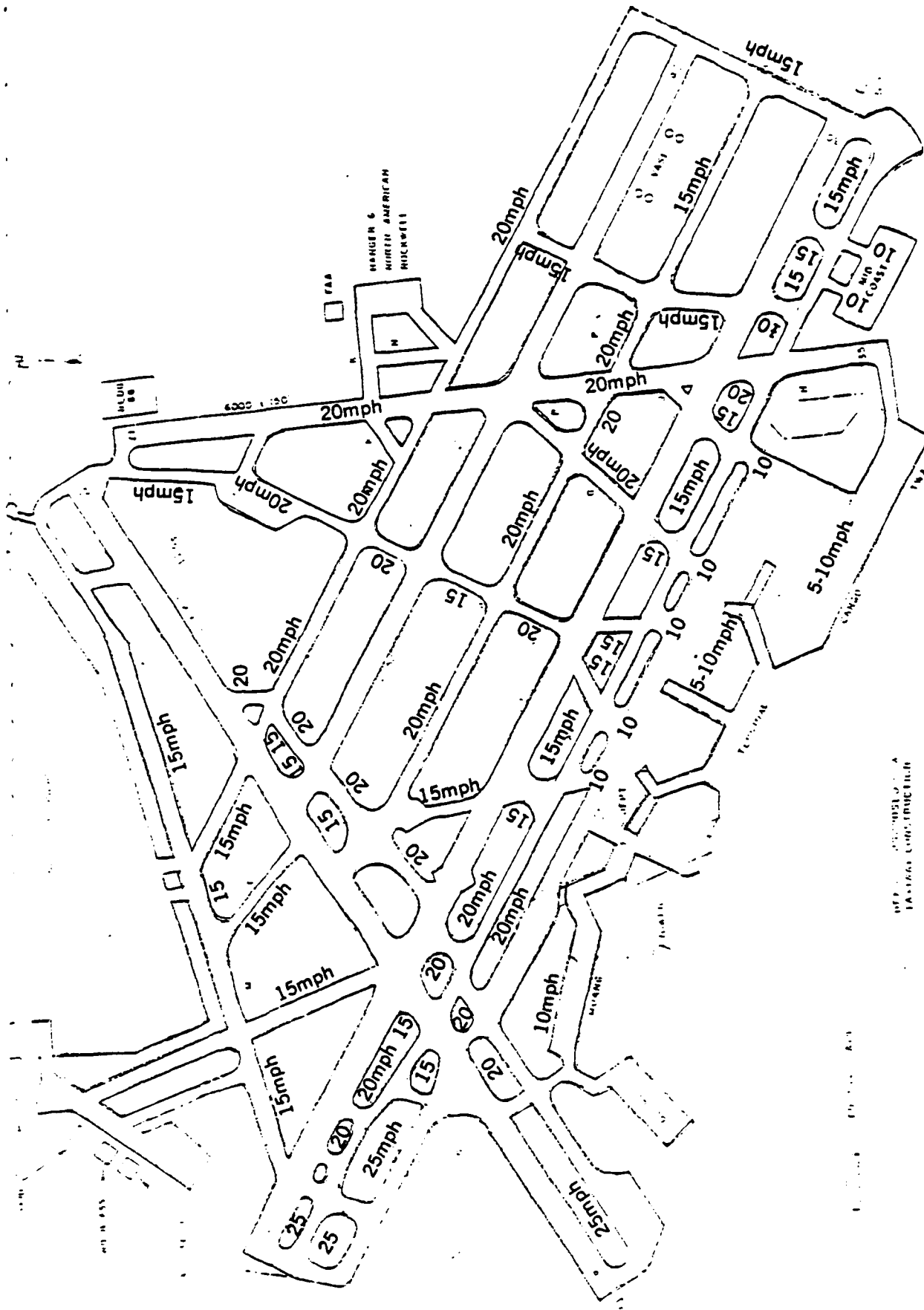


Exhibit 7C

Lambert-St. Louis International Airport

GENERALIZED TAXIWAY SPEEDS FOR
ARRIVALS AND DEPARTURES ON
RUNWAYS 30R AND 30L

Peat, Marwick, Mitchell & Co. March 1980

Table 4

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 4
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
30R	K	1	--
30R	K	2	11.0
30R	K	3	14.5
30R	K	4	15.0
30R	B	1	--
30R	B	2	12.0
30R	B	3	14.0
30R	B	4	--
30R	F	1	--
30R	F	2	13.0
30R	F	3	17.0
30R	F	4	--
30R	V	1	11.0
30R	V	2	--
30R	V	3	13.0
30R	V	4	--
30L	K	1	11.0
30L	K	2	11.0
30L	K	3	11.0
30L	K	4	--
30L	B	1	9.5
30L	B	2	10.5
30L	B	3	12.5
30L	B	4	--
30L	F	1	13.0
30L	F	2	13.0
30L	F	3	14.5
30L	F	4	15.5
30L	V	1	13.0
30L	V	2	13.5
30L	V	3	17.0
30L	V	4	--

Experiment 7A--Runways 30R, 30L, and 24
VFR Baseline
1979 Demand and Mix
Present ATC Procedures

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 7A
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names: AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: \pm 2 standard deviations
8. Time Switch: Not applicable

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1
10. Number of Runways: 3
11. Runway Identification: 30R, 30L, and 24
12. Departure Runway End Links: 30R and 30L

13. Runway Crossing Links (seconds):

Runway	Crossing link	Crossing time								D	C	B	A
		D	C	B	A	D	C	B	A				
30R	17-35												
	North				To be provided					20	20	20	20
30R	B				To be provided					20	20	20	20
30R	17-35												
	South				To be provided					20	20	20	20
30R	P				To be provided					20	20	20	20
30L	R	83	57	60	72	47	47	42	42	20	20	20	20
30L	B				To be provided					20	20	20	20
30L	Midcoast				To be provided					20	20	20	20
30L	E	34	34	42	50	27	27	29	32	20	20	20	20
30L	17-35				To be provided					20	20	20	20
30L	G	55	55	60	72	40	40	42	42	20	20	20	20
30L	J				To be provided					20	20	20	20
24	A									20	20	20	20
24	F				To be provided					20	20	20	20
24	30R-12L									20	20	20	20
24	I									20	20	20	20
24	P									20	20	20	20

14. Exit Taxiway Locations:

Runway	Exit	Feet from threshold
30R	B	4,745
30R	G	3,325
30R	6-24	6,990
30R	17-35	3,225
30L	A	8,935
30L	6-24	7,780
30L	E	6,200
30L	B-left	4,800
30L	B-right	4,800
30L	G	3,705
30L	J	2,735
30L	17-35	2,430
24	C	7,620
24	P	3,420
24	L	6,035
24	A	5,190
24	A-south	5,550

15. Holding Area-Link Number: 47

16. Airline Gates:

American -	3
Braniff -	1
Delta -	2
Eastern -	1,2
Frontier -	4
Northwest Orient -	6
US Air -	1
Ozark -	6
Republic -	5
TWA -	5
Air Taxi -	1,3
Air Freight -	6
Supplemental -	6

17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-VFR (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.7	2.9	3.0	3.1
	B	2.7	2.9	3.0	3.1
	C	3.5	3.7	3.0	3.1
	D	5.3	5.5	4.7	3.9

Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	30	30	45	50
	B	35	40	45	50
	C	45	45	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	1.11	1.4	1.7	1.83
	B	1.11	1.4	1.7	1.83
	C	1.11	1.4	1.7	1.83
	D	1.11	1.4	1.7	1.83

19. Route Data: See Figures 8a and 8b.
20. Two-Way Path Data: See Figures 8a and 8b.
21. Common Approach Paths:

<u>Aircraft class</u>		<u>Length (nautical miles)</u>
VFR	A	2.0
	B	2.0
	C	6.0
	D	6.0

22. Vectoring Delays: Report Sum of speed control, vectoring, and holding delay as one total.
23. Departure Runway Queue Control: Not used.
24. Gate Hold Control: When Runway 30R queue exceeds 6, when 30L exceeds 10.
25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.
26. Runway Interarrival Gap: Arrival separations increase from those specified in #18 to 8 miles when departure queue exceeds 6 on Runway 30L and 4 on Runway 30R.
27. Runway Crossing Delay Control: Arrival separations increase from those in #18 to 5 miles when crossing queue exceeds 4 on Runway 30L and 2 on Runway 30R.

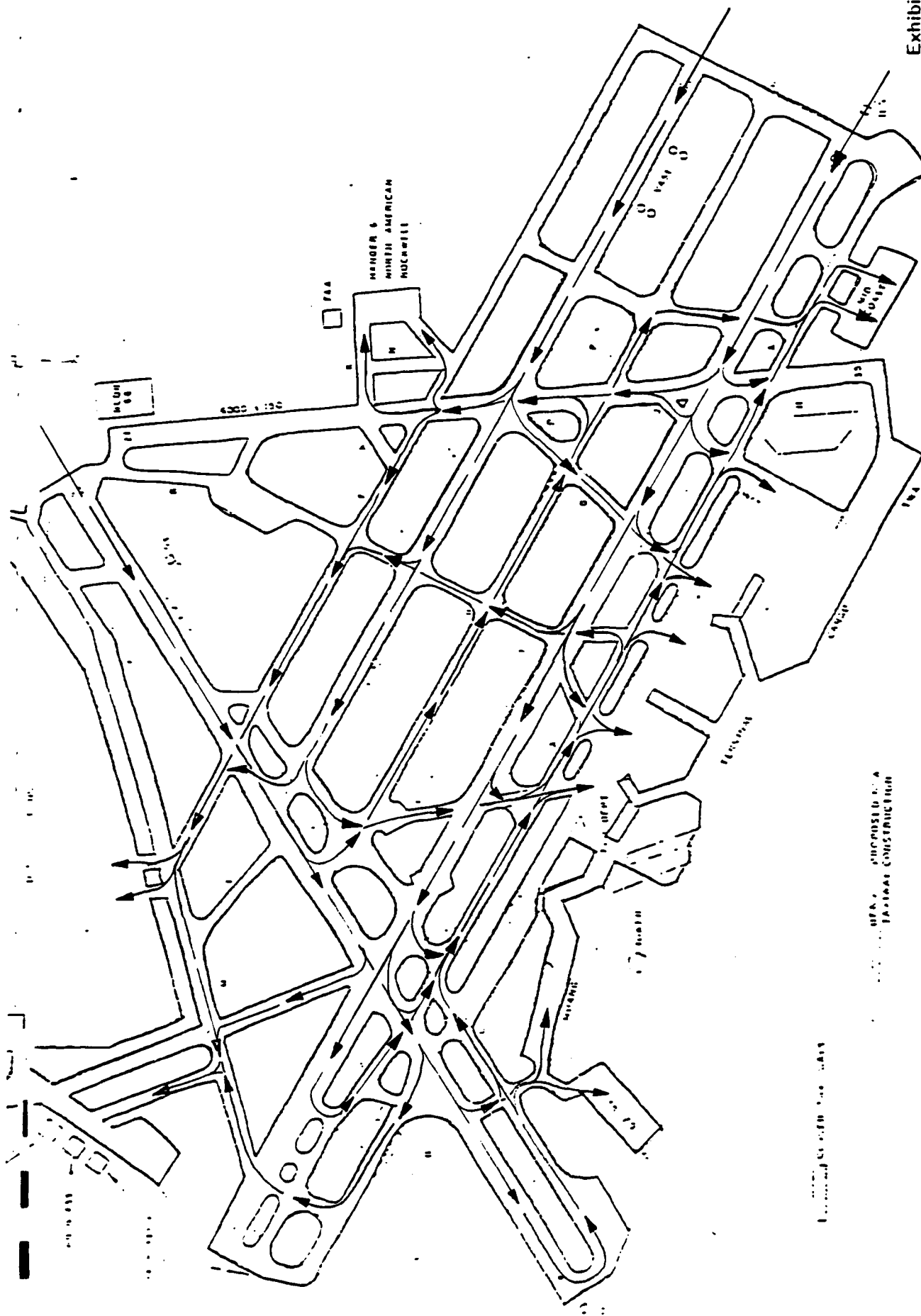


Exhibit 8A

Lambert-St. Louis International Airport

PRESENT CONFIGURATION FLOW DIAGRAM

DEPARTURES ON RUNWAYS 30R AND 30L
Feat, Marwick, Mitchell & Co. March 1980

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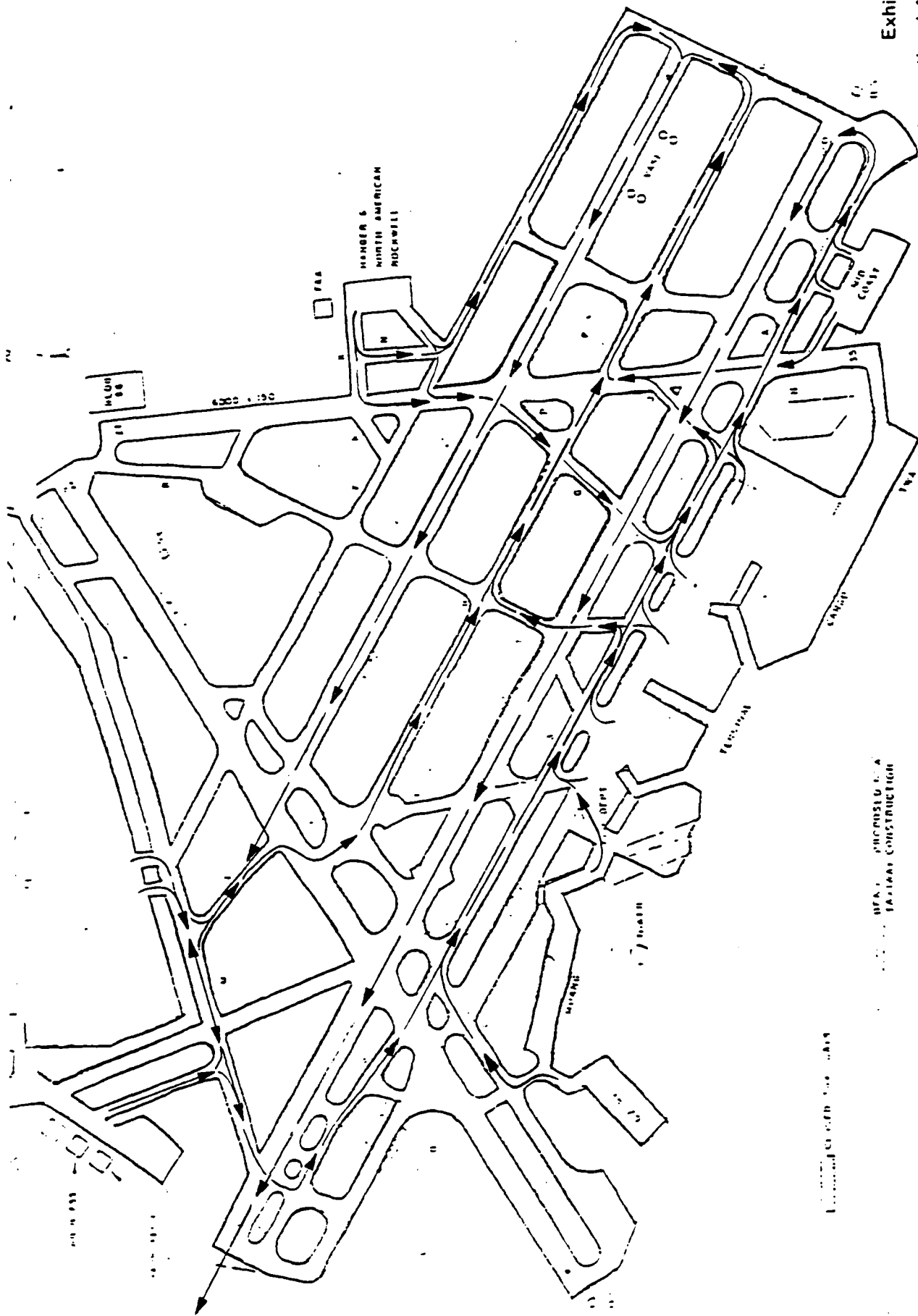


Exhibit 8B

Lambert—St. Louis International Airport

PRESENT CONFIGURATION FLOW DIAGRAM

DEPARTURES ON RUNWAYS 30R AND 30L

Peat, Marwick, Mitchell & Co. March 1980

[illegible]

28. Exit Taxiway Utilization (percent):

Runway	Class	Exit							
		B	G	24-6	17-35				
30R	A		1		99				
	B	41	44	2	13				
	C	67	11	22					
	D	100							
		C	A	L	P				
24	A		99		1				
	B		45		55				
	C	8	50	40	2				
	D	25	75						
		A	6-24	E	B- left	B- right	G	J	17-35
30L	A				50			50	
	B		9	14	18	9	14	5	32
	C		16	44	28	12	1		
	D	27	55	18					

29. Arrival Runway Occupancy Times (seconds):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>				<u>Weighted</u>				
		<u>B</u>	<u>G</u>	<u>24-6</u>	<u>17-35</u>	<u>average</u>				
30R	A				40	40				
	B	52	40	87	38	48				
	C	45	45	58		48				
	D	50				50				
		<u>A</u>	<u>6-24</u>	<u>E</u>	<u>B- left</u>	<u>B- right</u>	<u>G</u>	<u>J</u>	<u>17-35</u>	<u>Weighted average</u>
30L	A				45			30		38
	B		55	57	44	39	33	25	35	41
	C		61	52	40	41	34			49
	D	78	56	55						62
		<u>C</u>	<u>A</u>	<u>L</u>	<u>P</u>	<u>Weighted average</u>				
24	A		59		50	59				
	B		63		43	52				
	C	67	43	51	49	48				
	D	70	45			51				

30. Touch and Go Occupancy Times: No touch and go's.

31. Departure Runway Occupancy Times (seconds):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35
(Figure 8c).

33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

34. Gate Service Times: To be supplied by airport
task force.

35. Airspace Travel Times: Table 5.

36. Runway Crossing Times: 20 seconds.

37. Lateness Distribution: To be supplied by airport
task force.

38. Schedule: 1979 Demand and Mix.

Table 5

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 7A
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
24	K	1	10.5
24	K	2	10.5
24	K	3	12.5
24	K	4	13.0
24	B	1	--
24	B	2	14.5
24	B	3	14.5
24	B	4	--
24	F	1	12.5
24	F	2	12.5
24	F	3	16.5
24	F	4	--
24	V	1	--
24	V	2	13.0
24	V	3	16.5
24	V	4	--
30R	K	1	--
30R	K	2	11.0
30R	K	3	14.5
30R	K	4	15.0
30R	B	1	--
30R	B	2	12.0
30R	B	3	14.0
30R	B	4	--
30R	F	1	--
30R	F	2	13.0
30R	F	3	17.0
30R	F	4	--
30R	V	1	11.0
30R	V	2	--
30R	V	3	13.0
30R	V	4	--
30L	K	1	11.0
30L	K	2	11.0
30L	K	3	11.0
30L	K	4	--
30L	B	1	9.5
30L	B	2	10.5
30L	B	3	12.5
30L	B	4	--
30L	F	1	13.0
30L	F	2	13.0
30L	F	3	14.5
30L	F	4	15.5
30L	V	1	13.0
30L	V	2	13.5
30L	V	3	17.0
30L	V	4	--

Experiment 8--Runways 6, 12R, and 12L
VFR Baseline
1979 Demand and Mix
Present ATC Procedure

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 8
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names: AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: ± 2 standard deviations
8. Time Switch: Not applicable.

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1.
10. Number of Runways: 3
11. Runway Identification: 12R, 12L, and 6
12. Departure Runway End Links: 12R, 12L, and 6
13. Runway Crossing Links (seconds):

Runway	Crossing link	Crossing time											
		D	C	B	A	D	C	B	A	D	C	B	A
12R	R	83	57	60	72	47	47	42	42	20	20	20	20
12R	M	To be provided								20	20	20	20
12R	G	55	55	60	72	40	40	42	42	20	20	20	20
12R	E	34	34	42	50	27	27	29	32	20	20	20	20
12R	B	To be provided								20	20	20	20
12R	Midcoast	67	57	60	72	43	43	42	42	20	20	20	20
12R	6-24	20	20	25	30	16	16	18	20	20	20	20	20
12L	17-35	20	20	25	30	16	16	18	20	20	20	20	20
12L	B	To be provided								20	20	20	20
6	F	To be provided								20	20	20	20
6	A	To be provided								20	20	20	20
6	I	To be provided								20	20	20	20
6	L	To be provided								20	20	20	20

14. Exit Taxiway Locations:

Runway	Exit	Feet from threshold
12R	R	9,590
12R	17-35	7,280
12R	J	6,975
12R	G	6,005
12R	B	4,910
12R	E	3,510
12L	R	6,630
12L	P	4,560
12L	G	3,465
12L	17-35	3,465
12L	B	1,945

15. Holding Area-Link Number: 47

16. Airline Gates:

American -	3
Braniff -	1
Delta -	2
Eastern -	1,2
Frontier -	4
Northwest Orient -	6
US Air -	1
Ozark -	6
Republic -	5
TWA -	5
Air Taxi -	1,3
Air Freight -	6
Supplemental -	6

17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-VFR (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.7	2.9	3.0	3.1
	B	2.7	2.9	3.0	3.1
	C	3.5	3.7	3.0	3.1
	D	5.3	5.5	4.7	3.9

Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>B</u>	<u>C</u>	<u>D</u>	
Lead Aircraft Class	A	30	30	45	50
	B	35	40	45	50
	C	45	45	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	1.11	1.4	1.7	1.83
	B	1.11	1.4	1.7	1.83
	C	1.11	1.4	1.7	1.83
	D	1.11	1.4	1.7	1.83

19. Route Data: See Figures 9a and 9b.

20. Two-Way Path Data: See Figures 9a and 9b.

21. Common Approach Paths:

<u>Aircraft class</u>		<u>Length (nautical miles)</u>
VFR	A	2.0
	B	2.0
	C	6.0
	D	6.0

22. Vectoring Delays: Report sum of speed control, vectoring, and holding delay as one total.

23. Departure Runway Queue Control: Not used.

24. Gate Hold Control: When Runway 12L queue exceeds 6, when Runway 12R queue exceeds 10, and when Runway 6 queue exceeds 10.

25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.

26. Runway Interarrival Gap: Arrival separations increase from those specified in No. 18 to 8 miles when departure queue is greater than 6 on Runway 12R and 6, and greater than 4 on Runway 12L.

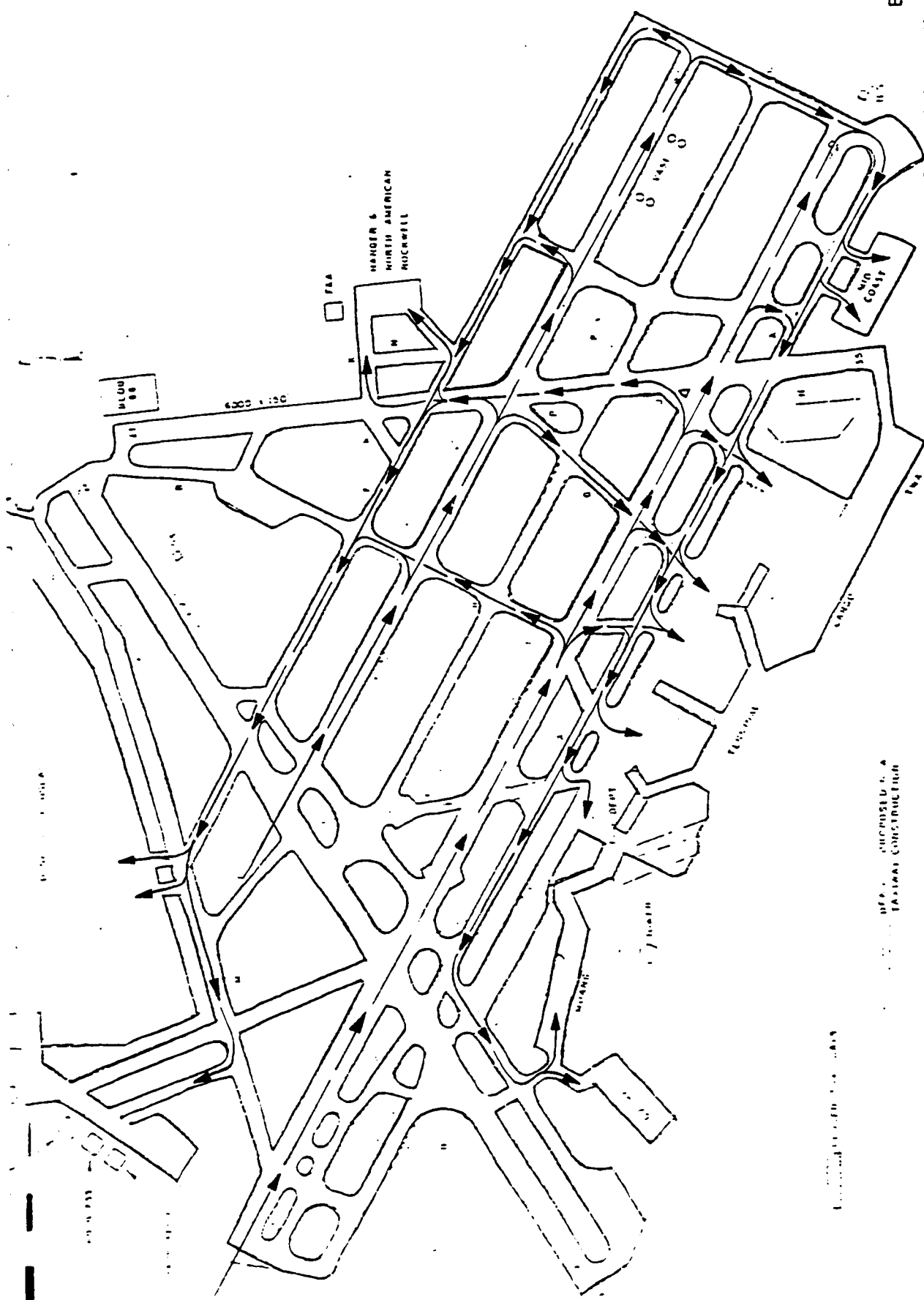


Exhibit 9
 Lambert-St. Louis International Airport
 PRESENT CONFIGURATION
 FLOW DIAGRAM
 ARRIVALS ON RUNWAYS 12R AND 12L
 Peat, Marwick, Mitchell & Co. March 1981
 340 111 111
 404 422 404

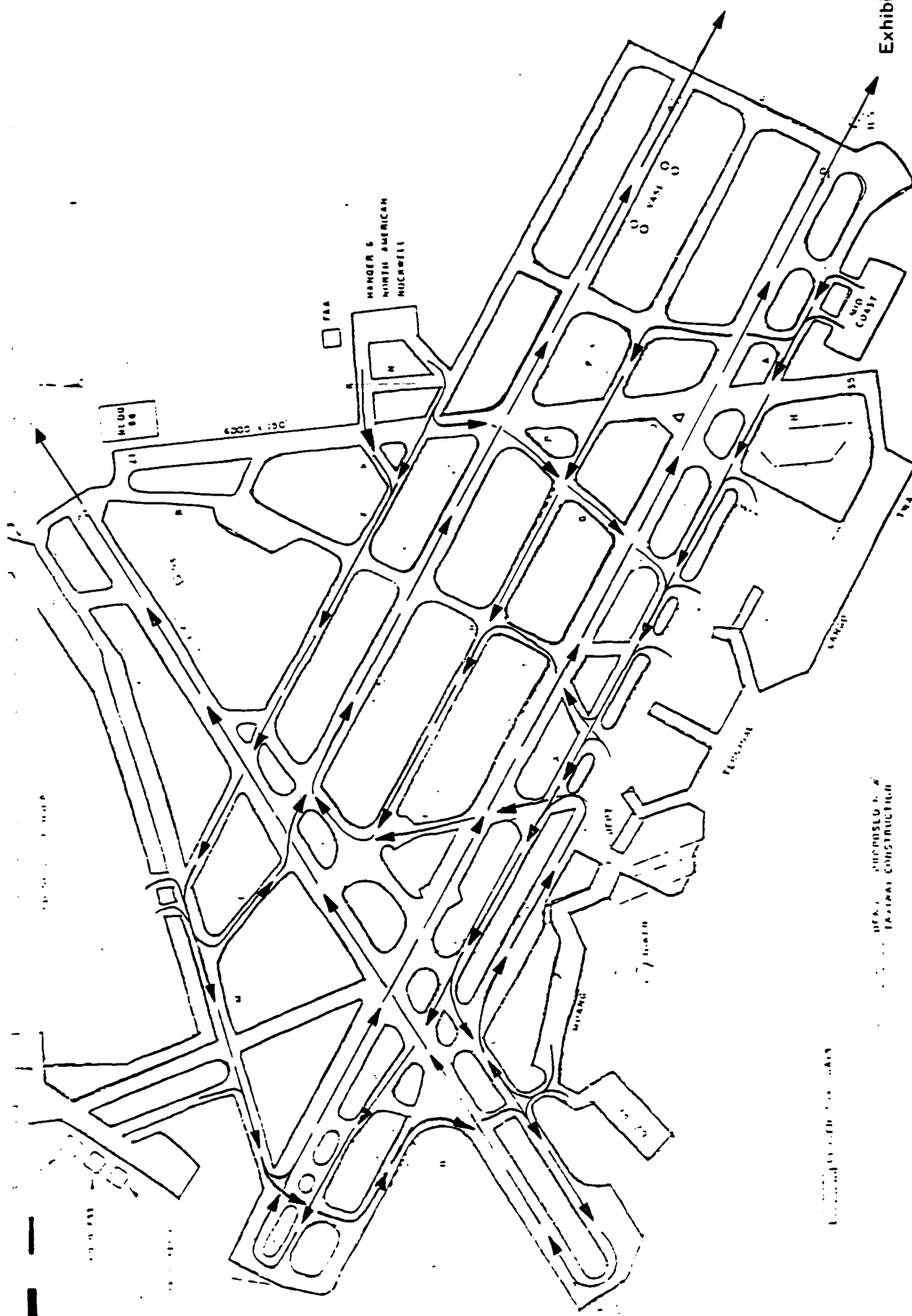


Exhibit 9B

Lambert—St. Louis International Airport

PRESENT CONFIGURATION FLOW DIAGRAM

DEPARTURES ON RUNWAYS 12R, 12L AND 6
Peat, Marwick, Mitchell, & Co., March 1980

Peat, Marwick, Mitchell & Co. March 1980

AM 928 JUL 6 1961

27. Runway Crossing Delay Control: Arrival separations increase from those in No. 18 to 5 miles when crossing queue is greater than 4 on Runways 6 and 12R, and greater than 2 on Runway 12L.

28. Exit Taxiway Utilization (percent):

Runway	Class	Exit					
		R	17-35	J	G	B	E
12R	A					67	33
	B		17	6	13	46	18
	C		14	17	39	28	2
	D	5	10	29	43	14	
		R	P	G	17-35	B	
12L	A			99		1	
	B	10	9	32	42	7	
	C	25	54	17	4		
	D	100					

29. Arrival Runway Occupancy Times (seconds):

Runway	Class	Exit						Weighted average
		R	17-35	J	G	B	E	
12R	A					72	53	66
	B		60	60	53	50	44	52
	C		57	56	50	41	38	50
	D	83	61	54	57	40		56
		R	P	G	17-35	B		Weighted average
12L	A					48		48
	B	80	61	48	47	40		51
	C	65	42	42	32			46
	D	65						65

30. Touch and Go Occupancy Times: No touch and go's.

31. Departure Runway Occupancy Times (seconds):

Aircraft class	Mean	Standard deviation
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35
(see Figure 9c).

33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

34. Gate Service Times: To be supplied by airport task force.
35. Airspace Travel Times: See Table 6.
36. Runway Crossing Times: 20 seconds
37. Lateness Distribution: To be supplied by airport task force.
38. Schedule: 1979 Demand and Mix

Exhibit 9C

Lambert-St. Louis International Airport

GENERALIZED TAXIWAY SPEEDS FOR
ARRIVALS ON RUNWAYS 12R AND 12L AND
DEPARTURES ON RUNWAYS 12R, 12L AND 6

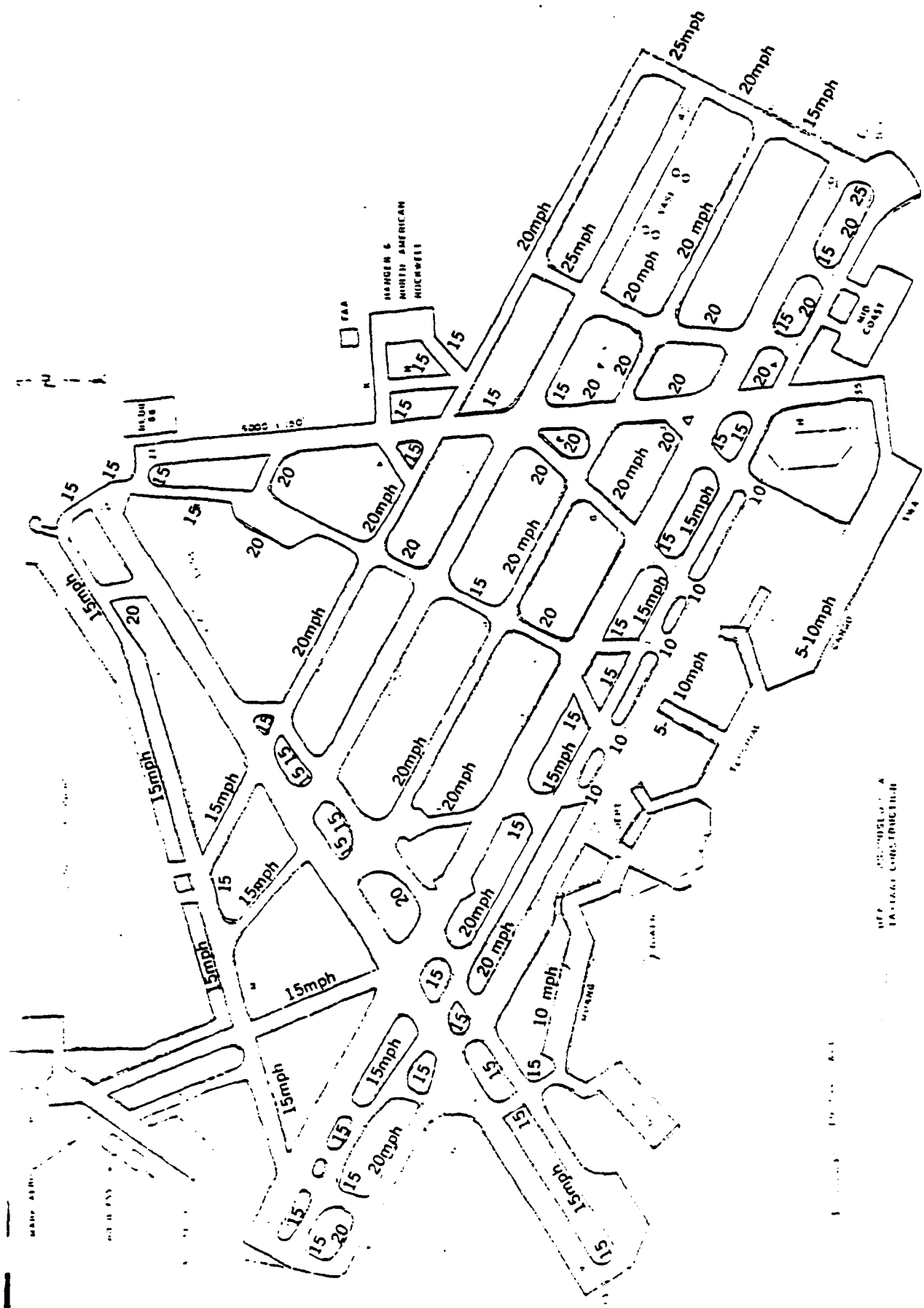


Table 6

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 8
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
12R	K	1	13.0
12R	K	2	13.0
12R	K	3	15.0
12R	K	4	--
12R	B	1	13.0
12R	B	2	13.5
12R	B	3	16.5
12R	B	4	17.0
12R	F	1	11.0
12R	F	2	11.0
12R	F	3	11.5
12R	F	4	--
12R	V	1	11.0
12R	V	2	11.0
12R	V	3	11.5
12R	V	4	--
12L	K	1	--
12L	K	2	13.0
12L	K	3	14.5
12L	K	4	17.0
12L	B	1	--
12L	B	2	13.0
12L	B	3	14.5
12L	B	4	--
12L	F	1	--
12L	F	2	11.0
12L	F	3	15.5
12L	F	4	15.5
12L	V	1	--
12L	V	2	10.0
12L	V	3	14.5
12L	V	4	14.5

Experiment 11--Runway 24
IFR2 Baseline
1979 Demand and Mix
Present ATC Procedures

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 11
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names:
AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: ± 2 standard deviations
8. Time Switch: Not applicable

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1.
10. Number of Runways: 1
11. Runway Identification: 24
12. Departure Runway End Links: 24
13. Runway Crossing Links: None
14. Exit Taxiway Locations:

<u>Runway</u>	<u>Exit</u>	<u>Feet from threshold</u>
24	C	7,620
	A-South	5,550
	L	6,035
	A	5,190
	E-South	3,825

15. Holding Area-Link Number: 47
16. Airline Gates:
- | | |
|--------------------|-----|
| American - | 3 |
| Braniff - | 1 |
| Delta - | 2 |
| Eastern - | 1,2 |
| Frontier - | 4 |
| Northwest Orient - | 6 |
| US Air - | 1 |
| Ozark - | 6 |
| Republic - | 5 |
| TWA - | 5 |
| Air Taxi - | 1,3 |
| Air Freight - | 6 |
| Supplemental - | 6 |
17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-IFR2 (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	3.8	4.0	4.1	4.2
	B	3.8	4.0	4.1	4.2
	C	4.8	5.0	4.1	4.2
	D	6.8	7.0	6.1	5.2

Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	60	60	60	60
	B	60	60	60	60
	C	60	60	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.0	2.0	2.0	2.0
	B	2.0	2.0	2.0	2.0
	C	2.0	2.0	2.0	2.0
	D	2.0	2.0	2.0	2.0

19. Route Data: See Figures 10a and 10b.20. Two-Way Path Data: See Figures 10a and 10b.

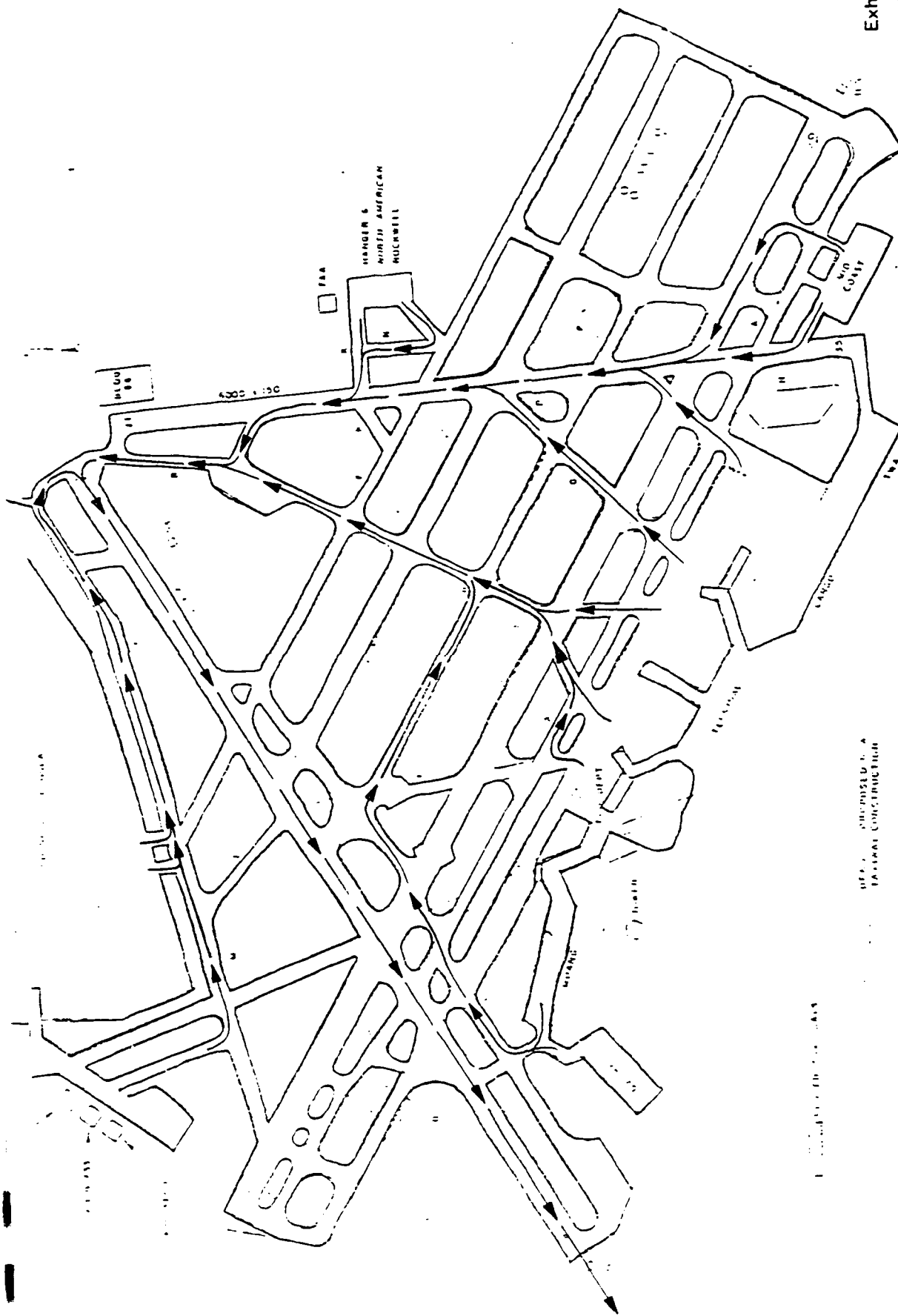


Exhibit 10B

Lambert—St. Louis International Airport

PRESENT CONFIGURATION

FLOW DIAGRAM

DEPARTURES ON RUNWAY 24

Peat, Marwick, Mitchell & Co., March 1980

3300 1117
AND 922 0121

21. Common Approach Paths:

	<u>Aircraft class</u>	<u>Length (nautical miles)</u>
IFR2	A	6.0
	B	6.0
	C	6.0
	D	6.0

22. Vectoring Delays: Report sum of speed control, vectoring, and holding delay as one total.

23. Departure Runway Queue Control: Not used.

24. Gate Hold Control: When Runway 24 queue exceeds 10.

25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.

26. Runway Interarrival Gap: Arrival separations increase from those specified in No. 18 to 8 miles when departure queue exceeds 6 on Runway 24.

27. Runway Crossing Delay Control: No runway crossing links.

28. Exit Taxiway Utilization (percent):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>			
		<u>A</u>	<u>P</u>	<u>C</u>	<u>L</u>
24	A	100			
	B	45	55		
	C	50	2	8	40
	D	75		25	

29. Arrival Runway Occupancy Times (seconds):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>				<u>Weighted average</u>
		<u>A</u>	<u>P</u>	<u>C</u>	<u>L</u>	
24	A	59				59
	B	63	47			54
	C	43	49	67	51	48
	D	45		70		51

30. Touch and Go Occupancy Times: No touch and go's.

31. Departure Runway Occupancy Times (seconds):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35
(see Figure 10c).

33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

34. Gate Service Times: To be supplied by airport
task force

35. Airspace Travel Times: See Table 7.

36. Runway Crossing Times: 20 seconds

37. Lateness Distribution: To be supplied by airport
task force

38. Schedule: 1979 Demand and Mix

Exhibit 10C

Lambert—St. Louis International Airport

GENERALIZED TAXIWAY SPEEDS FOR ARRIVALS AND DEPARTURES ON RUNWAY 24

Peat, Marwick, Mitchell & Co. March 1980

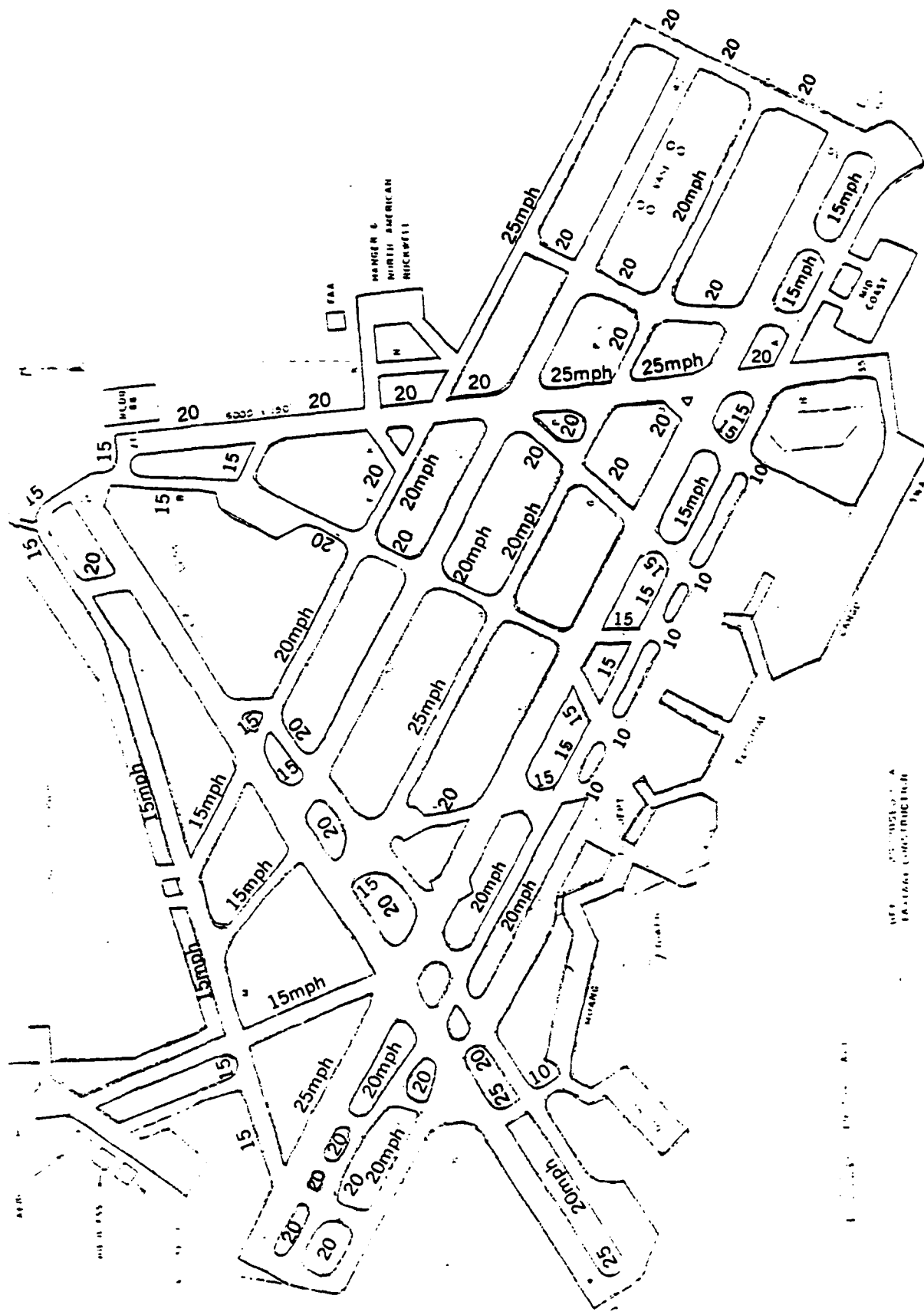


Table 7

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 11
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
24	K	1	10.5
24	K	2	10.5
24	K	3	12.5
24	K	4	13.0
24	B	1	--
24	B	2	14.5
24	B	3	14.5
24	B	4	--
24	F	1	12.5
24	F	2	12.5
24	F	3	16.5
24	F	4	--
24	V	1	--
24	V	2	13.0
24	V	3	16.5
24	V	4	--

Experiment 12--Runways 17, 12R, and 12L
VFR Baseline
1979 Demand and Mix
Present ATC Procedures

A. Logistics

1. Title: Lambert-St. Louis International Airport
Experiment 12
2. Random Number Seeds: 2017, 3069, 4235, 5873,
6981, 7137, 8099, 9355, 0123, 1985
3. Start and Finish Times: 0700 to 2200
4. Print Options: Standard options including summary
outputs
5. Airline Names: AA - American
AL - US Air
BN - Braniff
DL - Delta
EA - Eastern
FL - Frontier
NW - Northwest Orient
OZ - Ozark
RC - Republic
TW - Trans World Airlines
AT - Air Taxi
AF - Air Freight
ML - Military
GA - General Aviation
SS - Supplemental
6. Processing Options: COMPUTE
7. Truncation Limits: ± 2 standard deviations
8. Time Switch: Not applicable

B. Airfield Physical Characteristics

9. Airfield Network: See Figure 1.
10. Number of Runways: 2
11. Runway Identification: 17, 12R, and 12L
12. Departure Runway End Links: 12R and 12L
13. Runway Crossing Links (seconds):

Runway	Crossing link	Crossing time											
		D	C	B	A	D	C	B	A	D	C	B	A
12R	R	83	57	60	72	47	47	42	42	20	20	20	20
12R	M									20	20	20	20
12R	G	55	55	60	72	40	40	42	42	20	20	20	20
12R	Midcoast	65	57	60	72	43	43	42	42	20	20	20	20
12R	E	34	34	42	50	27	27	29	32	20	20	20	20
12R	17-35	67	57	60	72	43	43	42	42	20	20	20	20
12R	C	20	20	25	30	16	16	18	20	20	20	20	20
12R	D			To be provided						20	20	20	20
12L	17-35	20	20	25	30	16	16	18	20	20	20	20	20
12L	B			To be provided									
12L	P			To be provided									
17	K			To be specified									
17	F			To be specified									

14. Exit Taxiway Locations:

Runway	Exit	Feet from threshold
12R	R	9,590
12R	17-35	7,280
12R	J	6,975
12R	G	6,005
12R	B	4,910
12R	E	3,510
12L	R	6,630
12L	P	4,560
12L	G	3,465
12L	17-35	3,465
12L	B	1,945
17	F	2,370
17	K	2,000

15. Holding Area-Link Number: 47

16. Airline Gates:

American -	3
Braniff -	1
Delta -	2
Eastern -	1,2
Frontier -	4
Northwest Orient -	6
US Air -	1
Ozark -	6
Republic -	5
TWA -	5
Air Taxi -	1,3
Air Freight -	6
Supplemental -	6

17. General Aviation Basing Areas: 7, 8, 9, 10, 11, 12, and 13

C. ATC Procedures

18. Aircraft Separations:

Arrival-Arrival Separation-VFR (nautical miles)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.7	2.9	3.0	3.1
	B	2.7	2.9	3.0	3.1
	C	3.5	3.7	3.0	3.1
	D	5.3	5.5	4.7	3.9

Departure-Departure Separations-VFR (seconds)

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	30	30	45	50
	B	35	40	45	50
	C	45	45	60	60
	D	120	120	120	90

Departure-Arrival Separation (nautical miles)

		Trail Aircraft Class			
		A	B	C	D
Lead Aircraft Class	A	1.11	1.4	1.7	1.83
	B	1.11	1.4	1.7	1.83
	C	1.11	1.4	1.7	1.83
	D	1.11	1.4	1.7	1.83

19. Route Data: See Figures 11a and 11b.

20. Two-Way Path Data: See Figures 11a and 11b.

21. Common Approach Paths:

		Aircraft class	Length (nautical miles)
VFR	A		2.0
	B		2.0
	C		6.0
	D		6.0

22. Vectoring Delays: Report sum of speed control, vectoring, and holding delay as one total.

23. Departure Runway Queue Control: Not used.

24. Gate Hold Control: When Runway 12L queue exceeds 6, when Runway 12R queue exceeds 10.

25. Departure Airspace Constraints: Specified in separations and no aircraft held at gate due to airspace constraints.

26. Runway Interarrival Gap: Arrival separations increase from those specified in No. 18 to 8 miles when departure queue is greater than 6 on Runway 12R and greater than 4 on Runway 12L.

27. Runway Crossing Delay Control: Arrival separations increase from those in No. 18 to 5 miles when crossing queue is greater than 4 on Runway 12R and greater than 2 on Runway 12L.

28. Exit Taxiway Utilization (percent):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>					
		<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B-left</u>	<u>B-right</u>
12R	A					67	33
	B		17	6	13	46	18
	C		14	17	39	28	2
	D	5	10	29	43	14	

		<u>R</u>	<u>P</u>	<u>17-35</u>	<u>G</u>	<u>B</u>
12L	A			99		
	B	10	9	32	42	7
	C	25	54	17	4	
	D	100				

		<u>F</u>	<u>K</u>
17	A		
	B		
	C		100
	D		100

29. Arrival Runway Occupancy Times (seconds):

<u>Runway</u>	<u>Class</u>	<u>Exit</u>						<u>Weighted average</u>
		<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B-left</u>	<u>B-right</u>	
12R	A					72	53	66
	B		60	60	53	50	44	52
	C		57	56	50	41	38	50
	D	83	61	54	57	40		56

<u>Runway</u>	<u>Class</u>	<u>Exit</u>					<u>Weighted average</u>
		<u>R</u>	<u>P</u>	<u>17-35</u>	<u>G</u>	<u>B</u>	
12L	A				48	48	48
	B	80	61	47	48	40	51
	C	65	42	32	42		46
	D	65					65
		<u>F</u>	<u>K</u>				
17	A						
	B	To be provided					
	C						
	D						

30. Touch and Go Occupancy Times: No touch and go's.

31. Departure Runway Occupancy Times (seconds):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	34	4
B	34	4
C	39	4
D	39	4

32. Taxi Speeds (knots): 5, 10, 15, 20, 25, and 35
(see Figure 11c).

33. Approach Speeds (knots):

<u>Aircraft class</u>	<u>Mean</u>	<u>Standard deviation</u>
A	95	10
B	120	10
C	130	10
D	140	10

- 34. Gate Service Times: To be supplied by airport task force
- 35. Airspace Travel Times: See Table 8.
- 36. Runway Crossing Times: 20 seconds
- 37. Lateness Distribution: To be supplied by airport task force
- 38. Schedule: 1979 Demand and Mix

Table 8

ARRIVAL FIX TRAVEL TIME--EXPERIMENT 12
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

<u>Runway name</u>	<u>Fix code</u>	<u>Class</u>	<u>Travel time (minutes)</u>
12R	K	1	13.0
12R	K	2	13.0
12R	K	3	15.0
12R	K	4	--
12R	B	1	13.0
12R	B	2	13.5
12R	B	3	16.5
12R	B	4	17.0
12R	F	1	11.0
12R	F	2	11.0
12R	F	3	11.5
12R	F	4	--
12R	V	1	11.0
12R	V	2	11.0
12R	V	3	11.5
12R	V	4	--
12L	K	1	--
12L	K	2	13.0
12L	K	3	14.5
12L	K	4	17.0
12L	B	1	--
12L	B	2	13.0
12L	B	3	14.5
12L	B	4	--
12L	F	1	--
12L	F	2	11.0
12L	F	3	15.5
12L	F	4	15.5
12L	V	1	--
12L	V	2	10.0
12L	V	3	14.5
12L	V	4	14.5
17	K	1	
17	K	2	
17	K	3	
17	K	4	
17	B	1	
17	B	2	
17	B	3	
17	B	4	
17	F	1	
17	F	2	
17	F	3	
17	F	4	
17	V	1	
17	V	2	
17	V	3	
17	V	4	

Attachment C

INPUT DATA CHANGES
AIRFIELD IMPROVEMENT DELAY EXPERIMENTS

Lambert-St. Louis International Airport

St. Louis
Airport Improvement Task Force Delay Studies

Prepared by
Peat, Marwick, Mitchell & Co.
San Francisco, California

March 1980

Table 10

IFR2 ARRIVAL RUNWAY OCCUPANCY TIMES-PRESENT ATC (SECONDS)
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

Runway 12R

Class	Exit						Weighted average
	R	17-35	J	G	B-left	B-right	
A					82	63	76
B		70	70	63	60	54	62
C		67	66	60	57	48	60
D	93	71	64	67	50		66

Runway 12L

Class	Exit					Weighted average
	R	P	17-35	G	B	
A				58	58	58
B	90	71	57	58	50	61
C	75	52	42	52		56
D	75					75

Runway 30R

Class	Exit				Weighted average
	B	G	24-6	17-35	
A				50	50
B	62	50	97	48	58
C	55	55	68		58
D	60				60

Runway 30L

Class	Exit								Weighted average
	A	6-24	E	B-left	B-right	G	J	17-35	
A				55			40		48
B		65	67	54	49	43	35	45	51
C		71	62	50	51	44			59
D	88	66	65						72

Runway 24

Class	Exit				Weighted average
	C	A	L	P	
A		69		60	69
B		73		53	62
C	77	53	61	59	58
D	80	55			61

Runway 17

Class	Exit		Weighted average
	F	K	
A			
B		To be	
C		provided	
D			

Experiment Number: 5 (Input changes from experiment number 4)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 5
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATIS Procedures	
18 Aircraft separations	IFR1 Separations (Table 9)
19 Route data	
20 Runway path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR1 Demand Schedule

Experiment Number: 6 (Input changes from experiment number 5)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 6
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATIS Procedures	
18 Aircraft separations	IFR Separations (Table 9)
19 Route data	
20 Runway path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	Add 10 seconds (Table 10)
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR2 Demand Schedule

Experiment Number: 7 (Input changes from experiment number 7A)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. <u>Entities</u>	
1 Title	Lambert-St. Louis International Airport Exp. 7
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. <u>Airfield Physical Characteristics</u>	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Separure run-way end links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
5. <u>ATC Procedures</u>	
18 Aircraft separations	IFR Separations (Table 9)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separure runway queue control	
24 Gate hold control	
25 Separure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
4. <u>Aircraft Operational Characteristics</u>	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR Demand Schedule

Experiment Number: 9 (Input changes from experiment number 8)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. <u>Entities</u>	
1 Title	Lambert-St. Louis International Airport Exp. 9
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. <u>Airfield Physical Characteristics</u>	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Separure runway end links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
5. <u>ATC Procedures</u>	
18 Aircraft separations	IFR Separations (Table 9)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separure runway queue control	
24 Gate hold control	
25 Separure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
4. <u>Aircraft Operational Characteristics</u>	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR Demand Schedule

Experiment Number: 10 (Input changes from experiment number 8)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Facilities	
1 Title	Lambert-St. Louis International Airport Exp. 10
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	IFR Separations (Table 9)
19 Route data	
20 Two-way path data	
21 Common approach paths	6 Miles/All Aircraft
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	Add 10 seconds (Table 10)
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR Demand Schedule

Experiment Number: 13 (Input changes from experiment number 12)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Facilities	
1 Title	Lambert-St. Louis International Airport Exp. 13
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	IFR Separations (Table 9)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	IFR Demand Schedule

Table 11

ESTIMATED RUNWAY EXIT DISTANCES (IN FEET)
 FOR AIRFIELD IMPROVEMENT EXPERIMENTS
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

Runway 30R

Exit				
<u>R</u>	<u>Midcoast</u>	<u>17-35 & 6</u>	<u>B</u>	<u>A</u>
2,500	4,600	5,250	7,250	8,950

Runway 30L

Exit								
<u>R</u>	<u>Midcoast</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B</u>	<u>E</u>	<u>C</u>	<u>A</u>
1,000	2,400	3,250	3,700	4,500	5,800	7,300	8,300	9,900

Runway 12R

Exit						
<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B</u>	<u>E</u>	<u>"A"^a</u>
9,590	7,280	6,975	6,005	4,910	3,570	11,000

Runway 12L

Exit						
<u>R</u>	<u>P</u>	<u>G</u>	<u>17-35</u>	<u>B</u>	<u>"A"</u>	<u>"P"^b</u>
6,630	4,560	3,465	3,465	1,945	7,630	9,120

- a. "A" represents the taxiway end-link at the end of Runway 12R.
 b. "P" represents the taxiway end-link at the end of Runway 12L.

Table 12

ARRIVAL RUNWAY EXIT UTILIZATION (PERCENT)
 Lambert-St. Louis International Airport
 Airport Improvement Task Force Delay Studies

Runway 30R

Class	Exit				
	<u>R</u>	<u>Midcoast</u>	<u>G</u>	<u>B</u>	<u>6-24</u>
A	84	16			
B	2	96	2		
C		8	15	75	2
D			9	83	8

Runway 30L

Class	Exit						
	<u>Midcoast</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B</u>	<u>E</u>	<u>C</u>
A	37	47	16				
B		40	45	10	5		
C				23	52	25	
D					36	56	8

Runway 12R

Class	Exit					
	<u>R</u>	<u>17-35</u>	<u>J</u>	<u>G</u>	<u>B-left</u>	<u>B-right</u>
A					67	33
B		17	6	13	46	18
C		14	17	39	28	2
D	5	10	29	43	14	

Runway 12L

Class	Exit						
	<u>B</u>	<u>G</u>	<u>17-35</u>	<u>P</u>	<u>R</u>	<u>"A"^a</u>	<u>"P"^b</u>
A			99				
B	7	42	32	9	10		
C		4	17	54	17	8	
D					71	27	2

- a. "A" represents the taxiway end-link at the end of Runway 12R.
 b. "P" represents the taxiway end-link at the end of Runway 12L.

Table 13

ARRIVAL RUNWAY OCCUPANCY TIMES FOR
AIRFIELD IMPROVEMENTS (ESTIMATED SECONDS)
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

VFR-Runway 30R

Class	Exit				
	R	Midcoast	B	G	24-6
A	39	54			
B	32	47		52	
C		42	65	51	69
D			65	51	69

Runway 30L

Class	Exit						
	Midcoast	17-35	J	G	B	E	C
A	38	47	52				
B		39	44	51	54		
C				42	50	67	
D					50	67	77

Runway 12R

Class	Exit					
	R	17-35	J	G	B-left	B-right
A					72	53
B		60	60	53	50	44
C		57	56	50	41	38
D	83	61	54	57	40	

Runway 12L

Class	Exit						
	B	G	17-35	P	R	"A" ^a	"P" ^b
A	48	48					
B	40	48	47	61	80		
C		42	32	42	65	75	
D					67	75	90

- a. "A" represents the taxiway end-link at the end of Runway 12R.
b. "B" represents the taxiway end-link at the end of Runway 12L.

Experiment Number: 15 (Input changes from experiment number 2)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. <u>Experiments</u>	
1 Title	Lambert-St. Louis International Airport Exp. 15
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. <u>Airfield Physical Characteristics</u>	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
6. <u>Air Traffic Procedures</u>	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	To be specified
24 Gate hold control	
25 Departure airspace constraints	To be specified
26 Departure queue	
27 Runway crossing delay control	
4. <u>Aircraft Operational Characteristics</u>	
28 Fast taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	Airfield Development, IFRL Demand Schedule

Experiment Number: 16 (Input changes from experiment number 4)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. <u>Experiments</u>	
1 Title	Lambert-St. Louis International Airport Exp. 16
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. <u>Airfield Physical Characteristics</u>	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
6. <u>Air Traffic Procedures</u>	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	To be specified
24 Gate hold control	
25 Departure airspace constraints	To be specified
26 Departure queue	
27 Runway crossing delay control	
4. <u>Aircraft Operational Characteristics</u>	
28 Fast taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	Airfield Development VFR Demand Schedule

Experiment Number: 17 (Input changes from experiment number 5)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
A. Facilities		Lambert-St. Louis International Airport Exp. 17
1 Title		
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
B. Airfield Physical Characteristics		See Figure 2
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		See Figure 2
13 Runway crossing links		See Figure 2
14 Exit taxiway location		See Figure 2
15 Holding areas		
16 Airline gates		See Figure 2
17 General aviation basing areas		
C. ATC Procedures		
18 Aircraft separations		To be specified
19 Route data		To be specified
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		To be specified
25 Departure airspace constraints		To be specified
26 Departure queue		
27 Runway crossing delay control		
D. Aircraft Operational Characteristics		See Table 12
28 Exit taxiway utilization		See Table 13
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Airspace distribution		
38 Demand		Airfield Development IFR Demand Schedule

Experiment Number: 18A (Input changes from experiment number 7A)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
A. Facilities		Lambert-St. Louis International Airport Exp. 1
1 Title		
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
B. Airfield Physical Characteristics		See Figure 2
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		See Figure 2
13 Runway crossing links		See Figure 2
14 Exit taxiway location		See Figure 2
15 Holding areas		
16 Airline gates		See Figure 2
17 General aviation basing areas		
C. ATC Procedures		
18 Aircraft separations		To be specified
19 Route data		To be specified
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		To be specified
25 Departure airspace constraints		To be specified
26 Departure queue		
27 Runway crossing delay control		
D. Aircraft Operational Characteristics		See Table 12
28 Exit taxiway utilization		See Table 13
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Airspace distribution		
38 Demand		Airfield Development VFR Demand Schedule

Experiment Number: 18 (Input changes from experiment number 18A)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Location	
1 Title	Lambert-St. Louis International Airport Exp. 18
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
6. A/C Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	To be specified
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	To be specified
25 Departure airspace constraints	
26 Departure queue	To be specified
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	Airfield Development IFR Demand Schedule

Experiment Number: 19 (Input changes from experiment number 8)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Location	
1 Title	Lambert-St. Louis International Airport Exp. 19
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
6. A/C Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	To be specified
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	To be specified
25 Departure airspace constraints	
26 Departure queue	To be specified
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	Airfield Development VFR Demand Schedule

Experiment Number: 20 (Input changes from experiment number 9)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Variables	
1 Title	Lambert-St. Louis International Airport Exp. 20
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
6. ATIS Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	To be specified
25 Departure airspace constraints	
26 Departure queue	To be specified
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lossless distribution	
38 Demand	
Airfield Development IFPI Demand Schedule	

Experiment Number: 21 (Input changes from experiment number 11)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Variables	
1 Title	Lambert-St. Louis International Airport Exp. 11
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
6. ATIS Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	To be specified
25 Departure airspace constraints	
26 Departure queue	To be specified
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lossless distribution	
38 Demand	
Airfield Development VFR Demand Schedule	

Experiment Number: 22 (Input changes from experiment number 21)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Locations	
1 Title	Lambert-St. Louis International Airport Exp. 22
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
c. Aircraft Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	To be specified
24 Gate hold control	
25 Departure airspace constraints	To be specified
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi times	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Gateless distribution	
38 Demand	Airfield Development IFR Demand Schedule

Experiment Number: 23 (Input changes from experiment number 5)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Locations	
1 Title	Lambert-St. Louis International Airport Exp. 23
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. Aircraft Procedures	
18 Aircraft separations	LDA Approach Separations to be supplied
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Gateless distribution	
38 Demand	LDA Approach IFR Demand Schedule

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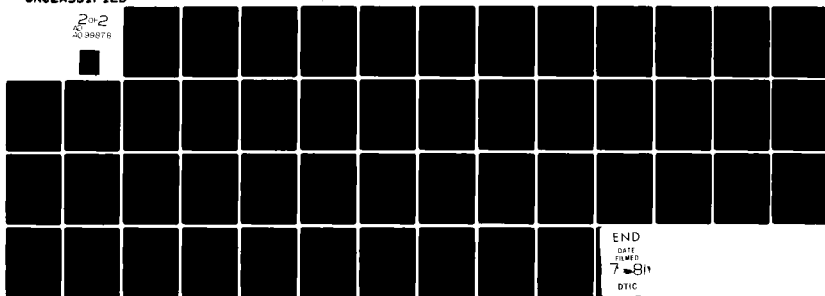
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Experiment Number: 24A (Input changes from experiment number 7A)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Location	
1 Title	Lambert-St. Louis International Airport Exp. 24A
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	LDA Approach Separations to be supplied
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	LDA Approach VFR Demand Schedule

Experiment Number: 24 (Input changes from experiment number 7)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Location	
1 Title	Lambert-St. Louis International Airport Exp. 24
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	LDA Approach Separations to be supplied
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	LDA Approach IFR Demand Schedule

Experiment Number: 25 (Input changes from experiment number 9)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 25
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	LDA Approach Separations to be supplied
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	LDA Approach JFR1 Demand Schedule

Experiment Number: 26 (Input changes from experiment number 1)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 26
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1985 Demand and Mix Baseline VPR

Experiment Number: 27 (Input changes from experiment number 2)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 27
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1905 Demand and Mix Baseline IF81

Experiment Number: 28 (Input changes from experiment number 3)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 28
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1905 Demand and Mix Baseline IF82

Experiment Number: 29 (Input changes from experiment number 4)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 29
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1905 Demand and Mix baseline VPR

Experiment Number: 30 (Input changes from experiment number 5)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 30
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1985 Demand and Mix Baseline IPR1

Experiment Number: 31 (Input changes from experiment number 6)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 31
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1985 Demand and Mix Baseline IFR2

Experiment Number: 32 (Input changes from experiment number 7)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 32
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1985 Demand and Mix Baseline IFR1

Experiment Number: 33 (Input changes from experiment number 9)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 33
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1985 Demand and Mix Baseline IFRI

Experiment Number: 34 (Input changes from experiment number 13)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 34
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1985 Demand and Mix Baseline IFRI

Experiment Number: 35 (Input changes from experiment number 14)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
1. Title	Lambert-St. Louis International Airport Exp. 35
2. Random number seeds	
3. Start and finish times	
4. Print options	
5. Airline names	
6. Processing options	
7. Truncation limits	
8. Time switch	
9. Airfield Physical Characteristics	
10. Airfield network	
11. Number of runways	
12. Runway identification	
13. Departure runway and links	
14. Runway crossing links	
15. Exit taxiway location	
16. Holding areas	
17. Airline gates	
18. General aviation basing areas	
9. ATC Procedures	
18. Aircraft separations	
19. Route data	
20. Two-way path data	
21. Common approach paths	
22. Vectoring delays	
23. Departure runway queue control	
24. Gate hold control	
25. Departure airspace constraints	
26. Departure queue	
27. Runway crossing delay control	
9. Aircraft Operational Characteristics	
28. Exit taxiway utilization	
29. Arrival runway occupancy times	
30. Touch-and-go runway occupancy times	
31. Departure runway occupancy times	
32. Taxi speeds	
33. Approach speeds	
34. Gate service times	
35. Airspace travel times	
36. Runway crossing times	
37. Lateness distribution	
38. Demand	1985 Demand and Mix VFR Airfield Improvement

Experiment Number: 36 (Input changes from experiment number 15)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Landing	
1. Title	Lambert-St. Louis International Airport Exp. 36
2. Random number seeds	
3. Start and finish times	
4. Print options	
5. Airline names	
6. Processing options	
7. Truncation limits	
8. Time switch	
9. Airfield Physical Characteristics	
10. Airfield network	
11. Number of runways	
12. Runway identification	
13. Departure runway and links	
14. Runway crossing links	
15. Exit taxiway location	
16. Holding areas	
17. Airline gates	
18. General aviation basing areas	
9. ATC Procedures	
18. Aircraft separations	
19. Route data	
20. Two-way path data	
21. Common approach paths	
22. Vectoring delays	
23. Departure runway queue control	
24. Gate hold control	
25. Departure airspace constraints	
26. Departure queue	
27. Runway crossing delay control	
9. Aircraft Operational Characteristics	
28. Exit taxiway utilization	
29. Arrival runway occupancy times	
30. Touch-and-go runway occupancy times	
31. Departure runway occupancy times	
32. Taxi speeds	
33. Approach speeds	
34. Gate service times	
35. Airspace travel times	
36. Runway crossing times	
37. Lateness distribution	
38. Demand	1985 Demand and Mix IFR Airfield Improvement

Experiment Number: 37 (Input changes from experiment number 16)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
1 Title	Lambert-St. Louis International Airport Exp. 37
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Sequence runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace arrival times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1985 Demand and Mix VFR Airfield Improvement

Experiment Number: 38 (Input changes from experiment number 17)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
1 Title	Lambert-St. Louis International Airport Exp. 38
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Sequence runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace arrival times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1985 Demand and Mix JFR Airfield Improvement

Experiment Number: 39 (Input changes from experiment number 18)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Initiatives	
1 Title	Lambert-St. Louis International Airport Exp. 39
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation handling areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1985 Demand and Mix IFRI Airfield Improvement

Experiment Number: 40 (Input changes from experiment number 20)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Initiatives	
1 Title	Lambert-St. Louis International Airport Exp. 40
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation handling areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1985 Demand and Mix IFRI Airfield Improvement

Experiment Number: 41 (Input changes from experiment number 21)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
a. Statistics		
1 Title	Lambert-St. Louis International Airport Exp. 41	
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
b. Airfield Physical Characteristics		
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		
13 Runway crossing links		
14 Exit taxiway location		
15 Holding areas		
16 Airline gates		
17 General aviation basing areas		
c. ATC Procedures		
18 Aircraft separations		
19 Route data		
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		
25 Departure airspace constraints		
26 Departure queue		
27 Runway crossing delay control		
d. Aircraft Operational Characteristics		
28 Exit taxiway utilization		
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Lateness distribution		
38 Demand	1985 Demand and Mix - IFRI LDA Approach	

Experiment Number: 42 (Input changes from experiment number 24)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
a. Logistics		
1 Title	Lambert-St. Louis International Airport Exp. 42	
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
b. Airfield Physical Characteristics		
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		
13 Runway crossing links		
14 Exit taxiway location		
15 Holding areas		
16 Airline gates		
17 General aviation basing areas		
c. ATC Procedures		
18 Aircraft separations		
19 Route data		
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		
25 Departure airspace constraints		
26 Departure queue		
27 Runway crossing delay control		
d. Aircraft Operational Characteristics		
28 Exit taxiway utilization		
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Lateness distribution		
38 Demand	1985 Demand and Mix - IFRI LDA Approach	

Experiment Number: 43 (Input changes from experiment number 25)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 43
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1995 Demand and Mix - IFRI LMA Approach

Experiment Number: 44 (Input changes from experiment number 26)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 44
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	Eliminate Added Terminal Gates
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	Terminal Expansion Demand Schedule

Experiment Number: 45 (Input changes from experiment number 17)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 45
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. AIRCRAFT OPERATIONAL CHARACTERISTICS	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1985 Demand - Increased Heavy Mix IFRI

Experiment Number: 46 (Input changes from experiment number 18)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 46
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. AIRCRAFT OPERATIONAL CHARACTERISTICS	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1985 Demand - Increase-A Heavy Mix IFRI

Experiment Number: 47 (Input changes from experiment number 23)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 47
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separation runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Truncation to runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Access distribution	
38 " and	
39 Demand - Increased Heavy Mix	

Experiment Number: 48 (Input changes from experiment number 17)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 48
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separation runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Truncation to runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Access distribution	
38 " and	
39 Demand - Decrease GA Airfield Development IFR1	

Experiment Number: 49 (Input changes from experiment number 24.)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
a. Logistics		
1 Title	Lambert-St. Louis International Airport Exp. 49	
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
b. Airfield Physical Characteristics		
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		
13 Runway crossing links		
14 Exit taxiway location		
15 Holding areas		
16 Airline gates		
17 General aviation basing areas		
c. ATC Procedures		
18 Aircraft separations		
19 Route data		
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		
25 Departure airspace constraints		
26 Departure queue		
27 Runway crossing delay control		
d. Aircraft Operational Characteristics		
28 Exit taxiway utilization		
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Lateness distribution		
38 Demand	1985 Mix - Decrease GA Airfield Development IPRI	

Experiment Number: 50 (Input changes from experiment number 23.)

SIMULATION MODEL INPUT		DESCRIPTION OF INPUT CHANGE
a. Logistics		
1 Title	Lambert-St. Louis International Airport Exp. 50	
2 Random number seeds		
3 Start and finish times		
4 Print options		
5 Airline names		
6 Processing options		
7 Truncation limits		
8 Time switch		
b. Airfield Physical Characteristics		
9 Airfield network		
10 Number of runways		
11 Runway identification		
12 Departure runway and links		
13 Runway crossing links		
14 Exit taxiway location		
15 Holding areas		
16 Airline gates		
17 General aviation basing areas		
c. ATC Procedures		
18 Aircraft separations		
19 Route data		
20 Two-way path data		
21 Common approach paths		
22 Vectoring delays		
23 Departure runway queue control		
24 Gate hold control		
25 Departure airspace constraints		
26 Departure queue		
27 Runway crossing delay control		
d. Aircraft Operational Characteristics		
28 Exit taxiway utilization		
29 Arrival runway occupancy times		
30 Touch-and-go runway occupancy times		
31 Departure runway occupancy times		
32 Taxi speeds		
33 Approach speeds		
34 Gate service times		
35 Airspace travel times		
36 Runway crossing times		
37 Lateness distribution		
38 Demand	1985 Demand -Decrease GA ILM Approach IPRI	

Experiment Number: 51 (Input changes from experiment number 14)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 51
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Points data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit runway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand and Mix Airfield Development VFR

Experiment Number: 52 (Input changes from experiment number 15)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 52
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Points data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit runway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand and Mix Airfield Development IFRI

Experiment Number: 53 (Input changes from experiment number 3)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 53
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	
12 Separure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	See Figure 2
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	To be specified
19 Points det.	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separure runway queue control	
24 Gate hold control	To be specified
25 Departure airspace constraints	
26 Departure queue	To be specified
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	See Table 12
29 Arrival runway occupancy times	See Table 13
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Taxiway distribution	
38 Demand	1990 Mix and Demand Airfield Development IP#2

Experiment Number: 54 (Input changes from experiment number 16)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 54
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Separure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Points det.	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Separure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Taxiway distribution	
38 Demand	1990 Demand and Mix Airfield Development VTR

Experiment Number: 55 (Input changes from experiment number 17)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 55
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Language distribution	
38 Demand	1990 Demand and Mix Airfield Development VFR

Experiment Number: 56 (Input changes from experiment number 6)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 56
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	See Figure 2
10 Number of runways	
11 Runway identification	See Figure 2
12 Departure runway and links	See Figure 2
13 Runway crossing links	See Figure 2
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	See Figure 2
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	To be specified
19 Route data	To be specified
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	To be specified
24 Gate hold control	To be specified
25 Departure airspace constraints	To be specified
26 Departure queue	To be specified
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	See Table 12
30 Touch-and-go runway occupancy times	See Table 13
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airplane travel times	
36 Runway crossing times	
37 Language distribution	
38 Demand	1990 Demand and Mix Airfield Development JFR2

Experiment Number: 57 (Input changes from experiment number 18)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Experiments	
1 Title	Lambert-St. Louis International Airport Exp. 57
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1990 Demand and Mix - Airfield Development IFRI

Experiment Number: 58 (Input changes from experiment number 20)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Experiments	
1 Title	Lambert-St. Louis International Airport Exp. 58
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Licensee distribution	
38 Demand	1990 Demand and Mix - Airfield Development IFRI

Experiment Number: 59 (Input changes from experiment number 22)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 59
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Takeoff distribution	
38 Second	
1990 Demand and Mix - Airfield Development IFRI	

Experiment Number: 60 (Input changes from experiment number 23)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 60
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Takeoff distribution	
38 Second	
1990 Demand and Mix - Airfield Development IFRI	

Experiment Number: 61 (Input changes from experiment number 24)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 61
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand and Mix - LDA Approach IFRI

Experiment Number: 62 (Input changes from experiment number 25)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 62
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand and Mix - LDA Approach IFRI

Experiment Number: 63 (Input changes from experiment number 44)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 63
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. A/C Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Taxiway speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airframe distribution	
38 Demand	1980 Demand and Mix - Terminal Expansion

Experiment Number: 64 (Input changes from experiment number 63)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 64
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	To be supplied
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	Relocated Midcoast Aviation Location
c. A/C Procedures	
18 Aircraft separations	To be supplied
19 Route data	To be supplied
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airframe distribution	
38 Demand	1990 Demand and Mix

Experiment Number: 61A (Input changes from experiment number 12.)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 64A
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	To be supplied
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	Relocated Midcoast Aviation Location
c. ATC Procedures	
18 Aircraft separations	To be supplied
19 Route data	To be supplied
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand and Mix

Experiment Number: 65 (Input changes from experiment number 17.)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 65
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand - Heavy Mix - Airfield Development IFR

Experiment Number: 66 (Input changes from experiment number 18)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 66
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Tailwind distribution	
38 Demand	1990 Demand - Heavy Mix - Airfield Development IPRI

Experiment Number: 67 (Input changes from experiment number 23)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 67
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Tailwind distribution	
38 Demand	1990 Demand - Heavy Mix - LOA Approach IPRI

Experiment Number: 68

(Input changes from experiment number 17)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 68
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1990 Demand-Decrease GA-Airfield Development IFRI

Experiment Number: 69

(Input changes from experiment number 18)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 69
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Airspace distribution	
38 Demand	1990 Demand-Decrease GA-Airfield Development IFRI

Experiment Number: 69A (Input changes from experiment number 11)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 69A
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
6. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand-Decrease CA-Baseline IFR2

Experiment Number: 70 (Input changes from experiment number 23)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
4. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 70
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
5. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
6. ATC Procedures	
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
7. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	1990 Demand-Decrease CA-LDA Approach IFR1

Experiment Number: 72 (Input changes from experiment number 52)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	Lambert-St. Louis International Airport Exp. 72
1 Title	
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	ATC Improvements - IFR (Table 14)
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Experiment Number: 73 (Input changes from experiment number 53)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	Lambert-St. Louis International Airport Exp. 73
1 Title	
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	ATC Improvements - IFR (Table 14)
18 Aircraft separations	
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Taxiway utilization	
29 Arrival runway occupancy times	Add 5 seconds to AROT's (Table 15)
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Table 14

AIRCRAFT SEPARATIONS WITH 1990 ATC
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

VFRArrival-Arrival Separations (nautical miles):

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	2.4	2.5	2.6	2.6
	B	2.4	2.5	2.6	2.6
	C	3.0	3.1	2.6	2.6
	D	3.5	3.6	3.2	2.7

Departure-Departure Separations (seconds):

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	35	45	45	50
	B	50	60	60	60
	C	50	60	60	60
	D	60	60	60	60

IFRArrival-Arrival Separations (nautical miles):

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	3.0	3.1	3.2	3.2
	B	3.0	3.1	3.2	3.2
	C	3.5	3.6	3.2	3.2
	D	4.0	4.1	3.7	3.2

Departure-Departure Separations (seconds):

		<u>Trail Aircraft Class</u>			
		<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
Lead Aircraft Class	A	60	60	60	60
	B	60	60	60	60
	C	60	60	60	60
	D	60	60	60	60

Table 15

FUTURE IFR2 ARRIVAL RUNWAY OCCUPANCY TIMES
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

Runway 12R

Class	Exit						Weighted average
	R	17-35	J	G	B-left	B-right	
A					77	58	71
B		65	65	58	55	49	57
C		62	61	55	46	43	55
D	88	66	59	62	45		61

Runway 12L

Class	Exit				
	<u>R</u>	<u>P</u>	<u>17-35</u>	<u>G</u>	<u>B</u>
A				53	53
B	85	66	52	53	45
C	70	47	37	47	
D	70				

Runway 30R

Class	Exit			
	<u>R</u>	<u>G</u>	<u>24-6</u>	<u>17-35</u>
A				45
B	57	45	92	43
C	50	50	63	
D	55			

Runway 30L

Class	Exit						
	<u>A</u>	<u>6-24</u>	<u>E</u>	<u>B-left</u>	<u>B-right</u>	<u>G</u>	<u>17-35</u>
A				50			35
B		60	62	49	44	38	30
C		66	57	45	46	39	40
D	83	61	60				

Experiment Number: 74 (Input changes from experiment number 54)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 74
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	ATC Improvements - VFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Experiment Number: 75 (Input changes from experiment number 55)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 75
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	ATC Improvements - IFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Experiment Number: 76 (Input changes from experiment number 56)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 76
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	ATC Improvements - IFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Clearance runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	Add 5 seconds to AROT's (Table 15)
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Clearance distribution	
38 Demand	

Experiment Number: 77 (Input changes from experiment number 57)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
A. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 77
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
B. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
C. ATC Procedures	
18 Aircraft separations	ATC Improvements - IFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Clearance runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
D. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Clearance distribution	
38 Demand	

Experiment Number: 78 (Input changes from experiment number 58)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 78
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	ATC Improvements - IFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Experiment Number: 79 (Input changes from experiment number 59)

SIMULATION MODEL INPUT	DESCRIPTION OF INPUT CHANGE
a. Logistics	
1 Title	Lambert-St. Louis International Airport Exp. 79
2 Random number seeds	
3 Start and finish times	
4 Print options	
5 Airline names	
6 Processing options	
7 Truncation limits	
8 Time switch	
b. Airfield Physical Characteristics	
9 Airfield network	
10 Number of runways	
11 Runway identification	
12 Departure runway and links	
13 Runway crossing links	
14 Exit taxiway location	
15 Holding areas	
16 Airline gates	
17 General aviation basing areas	
c. ATC Procedures	
18 Aircraft separations	ATC Improvements - IFR (Table 14)
19 Route data	
20 Two-way path data	
21 Common approach paths	
22 Vectoring delays	
23 Departure runway queue control	
24 Gate hold control	
25 Departure airspace constraints	
26 Departure queue	
27 Runway crossing delay control	
d. Aircraft Operational Characteristics	
28 Exit taxiway utilization	
29 Arrival runway occupancy times	
30 Touch-and-go runway occupancy times	
31 Departure runway occupancy times	
32 Taxi speeds	
33 Approach speeds	
34 Gate service times	
35 Airspace travel times	
36 Runway crossing times	
37 Lateness distribution	
38 Demand	

Attachment D

INPUT DATA SUMMARY
ANNUAL DELAY EXPERIMENTS

Lambert-St. Louis International Airport

St. Louis
Airport Improvement Task Force Delay Studies

Prepared by
Peat, Marwick, Mitchell & Co.
San Francisco, California

March 1980

ANNUAL DELAY MODELExperiment 81

1. Annual Demand: 336, 578

2. Group Specification:

- 3 day groups - high, average, low
 12 week groups - 12 months, January through December (1978)
 3 weather groups - VFR, IFR1, IFR2 and 3
 6 runway uses

	<u>Annual runways</u>	<u>Departure runways</u>
1.	12R, 12L	12R, 12L
2.	30R, 30L	30R, 30L
3.	30R, 30L, 24	30R, 30L
4.	12R, 12L	12R, 12L, 6
5.	24	24
6.	12R, 12L, 17	12R, 12L

3&

4. Traffic Distributions:

<u>Week group</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>
Percent of annual in one week	1.74	1.75	1.83	1.97	2.11	2.10
Number of weeks in one month	4.43	4.0	4.43	4.29	4.43	4.29
Percent of annual in one month	7.70	7.00	8.34	8.44	9.35	9.01
<u>Week group</u>	<u>July</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Percent of annual in one week	2.05	2.13	1.92	1.60	1.89	1.84
Number of weeks in one month	4.43	4.43	4.43	4.29	4.29	4.43
Percent of annual in one week	9.08	9.43	8.49	6.88	8.09	8.13

5&

6. Daily Traffic Distribution (August 1978 combined
2-week period 8/18/78 to 8/31/78):

Day group	<u>High</u>	<u>Average</u>	<u>Low</u>
Percent of weekly in one day	16.04	14.49	11.45
Number of days in day group	3	2	2
Percent of weekly traffic in day group	48.13	28.98	22.89

7. Weather Occurrences:

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>
Percent VFR	78.66	80.22	70.72	96.42	86.60	96.41
Percent IFR1	5.71	11.54	6.70	1.79	3.72	2.05
Percent IFR2&3	15.63	8.24	22.58	1.79	9.68	1.54
	<u>July</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Percent VFR	90.81	98.51	94.62	93.55	75.13	81.15
Percent IFR1	3.23	0.99	3.59	5.21	6.41	4.71
Percent IFR2&3	5.96	0.50	1.79	1.24	18.46	14.14

8. Hourly Runway Capacity Parameters:

<u>Runway use</u>	<u>Hourly Capacity (Ops/hr)</u>		
	<u>VFR1</u>	<u>IFR1</u>	<u>IFR2&3</u>
1	To be developed		
2			
3			
4			
5			
6			

9. Runway Use/Weather Group Demand Factors:

	<u>VFR1</u>	<u>IFR1</u>	<u>IFR2&3</u>
For all runways	1.0	0.9	0.81

10. Runway Use Occurrence:

<u>Runway</u>	<u>Percent occurrence</u>		
	<u>VFR1</u>	<u>IFR1</u>	<u>IFR2&3</u>
1			
2			
3	To be provided		
4			
5			
6			

11. Hourly Traffic:

<u>Hour</u>	<u>Percent daily traffic</u>	<u>Hour</u>	<u>Percent daily traffic</u>	<u>Hour</u>	<u>Percent daily traffic</u>	<u>Hour</u>	<u>Percent daily traffic</u>
00	1.0	06	1.9	12	4.9	18	7.0
01	0.5	07	4.5	13	5.5	19	7.4
02	0.1	08	7.0	14	5.7	20	5.1
03	0.5	09	6.0	15	5.0	21	3.2
04	1.1	10	5.4	16	8.3	22	4.1
05	1.9	11	4.6	17	7.0	23	2.3

12&

13. Delay Curve Specifications: To be determined after airfield simulation runs

14. Percent Arrivals - Daily percentage - 49.9%

<u>Hour</u>	<u>Percent arrivals</u>	<u>Hour</u>	<u>Percent arrivals</u>	<u>Hour</u>	<u>Percent arrivals</u>	<u>Hour</u>	<u>Percent arrivals</u>
00	50.0	06	50.0	12	46.5	18	46.2
01	50.0	07	50.0	13	56.4	19	46.6
02	50.0	08	50.7	14	35.4	20	47.4
03	50.0	09	49.1	15	68.8	21	50.0
04	50.0	10	35.6	16	55.6	22	50.0
05	50.0	11	59.5	17	52.3	23	50.0

15. Cancellation Diversion Specification: To be provided by Task Force

16. Title: St. Louis Annual Baseline 1979 Demand and Mix

DEMAND AND TRAFFIC DISTRIBUTION
Lambert-St. Louis International Airport
Airport Improvement Task Force Delay Studies

Annual Demand: 1978 - 340,476
1979 - 336,578
Revised 1979^a - 344,600

Traffic Distribution:

1978

<u>Week group</u>	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>Apr.</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sep.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
Percent of annual in one week	1.63	1.75	1.83	1.95	1.94	2.11	1.95	2.08	2.18	2.02	1.84	1.73
Number of weeks in one month	4.43	4.00	4.43	4.29	4.43	4.29	4.43	4.43	4.29	4.43	4.29	4.43
Percent of annual in one month	7.21	7.01	8.10	8.36	8.60	9.05	8.62	9.21	9.34	8.95	7.90	7.65

1979

Percent of annual in one week	1.74	1.75	1.88	1.97	2.11	2.10	2.05	2.13	1.92	1.60	1.89	1.84
Number of weeks in one month	4.43	4.00	4.43	4.29	4.43	4.29	4.43	4.43	4.29	4.43	4.29	4.43
Percent of annual in one month	7.70	7.00	8.34	8.44	9.35	9.01	9.08	9.43	8.49	6.86	8.09	8.13

Revised 1979^a

Percent of annual in one week	1.70	1.71	1.84	1.92	2.06	2.05	2.00	2.08	2.11	1.82	1.89	1.79
Number of weeks in one month	4.43	4.00	4.43	4.29	4.43	4.29	4.43	4.43	4.29	4.43	4.29	4.43
Percent of annual in one month	7.52	6.83	8.14	8.24	9.13	8.81	8.87	9.21	9.07	8.08	8.09	7.94

- a. Assumes no Ozark Airlines strike. Ozark Airlines has an estimated 4,700 operations per month at St. Louis. Strike affected September, October, and November traffic figures and lasted 52 days.

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>81A</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1985 Demand - 339,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>82</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1985 Demand - 339,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>83</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1985 Demand - 339,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>84</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1985 Demand - 339,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>85</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1985 Demand - 339,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>86</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4. -----	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>87</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>88</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1.	Annual Demand	1990 Demand - 362,000
2.	Group Specification	
3.	Traffic Distribution	
4.		
5.	Daily Traffic Distribution	
6.		
7.	Weather Occurrences	
8.	Hourly Runway Capacity Parameter	To be developed
9.	Runway Use/Weather Group Demand Factor	
10.	Runway Use Occurrences	
11.	Hourly Traffic	
12.	Delay Curve Specification	To be determined by airfield simulation
13.		
14.	Percent Arrivals	
15.	Cancellation Diversion Specification	
16.	Title	Lambert-St. Louis International Airport Experiment 89

ST. LOUIS DATA PACKAGE
Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>90</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>91</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1.	Annual Demand	1990 Demand - 362,000
2.	Group Specification	
3.	Traffic Distribution	
4.		
5.	Daily Traffic Distribution	
6.		
7.	Weather Occurrences	
8.	Hourly Runway Capacity Parameter	To be developed
9.	Runway Use/Weather Group Demand Factor	
10.	Runway Use Occurrences	
11.	Hourly Traffic	
12.	Delay Curve Specification	To be determined by airfield simulation
13.		
14.	Percent Arrivals	
15.	Cancellation Diversion Specification	
16.	Title	Lambert-St. Louis International Airport Experiment <u>92</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4. -----	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>93</u>

ST. LOUIS DATA PACKAGE

Annual Delay Model Changes

1. Annual Demand	1990 Demand - 362,000
2. Group Specification	
3. Traffic Distribution	
4.	
5. Daily Traffic Distribution	
6.	
7. Weather Occurrences	
8. Hourly Runway Capacity Parameter	To be developed
9. Runway Use/Weather Group Demand Factor	
10. Runway Use Occurrences	
11. Hourly Traffic	
12. Delay Curve Specification	To be determined by airfield simulation
13.	
14. Percent Arrivals	
15. Cancellation Diversion Specification	
16. Title	Lambert-St. Louis International Airport Experiment <u>94</u>

